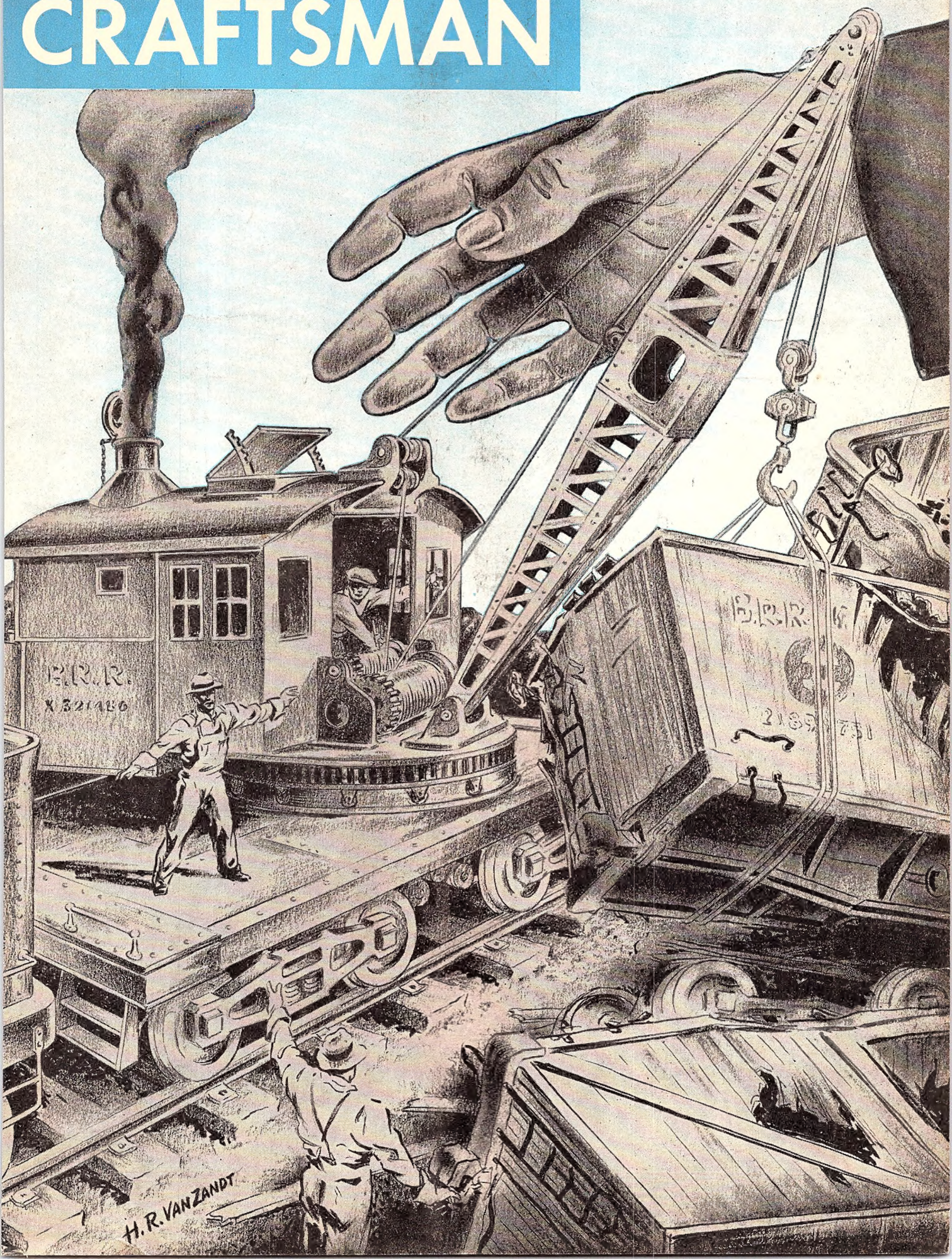
THE MODEL CRAFTSMAN

OCTOBER 1946 • 25 CENTS



— — FIRST!

SPEEDWAY PACEMAKER

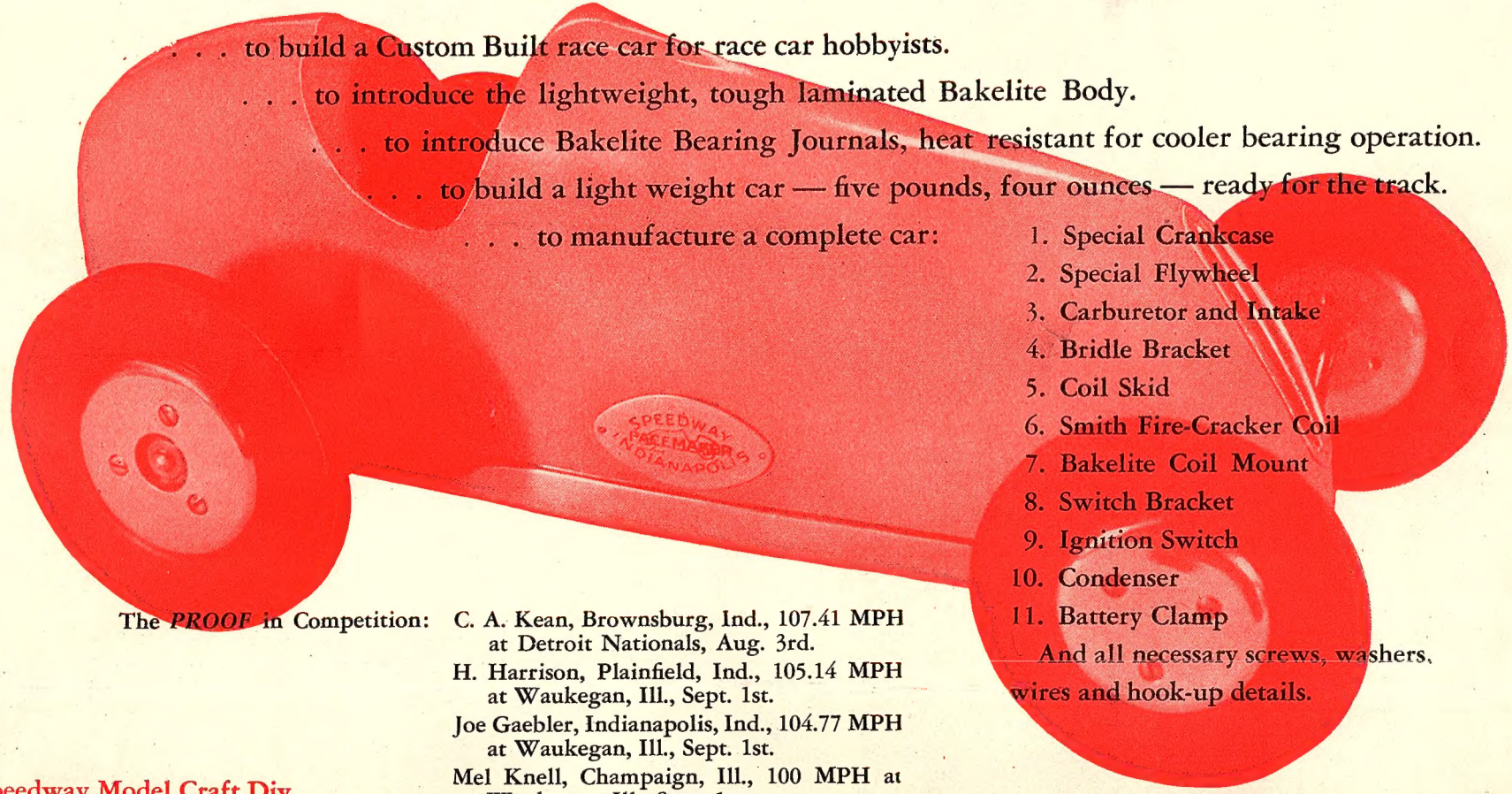
. . . to build a Custom Built race car for race car hobbyists.

. . . to introduce the lightweight, tough laminated Bakelite Body.

. . . to introduce Bakelite Bearing Journals, heat resistant for cooler bearing operation.

. . . to build a light weight car — five pounds, four ounces — ready for the track.

. . . to manufacture a complete car:



1. Special Crankcase
2. Special Flywheel
3. Carburetor and Intake
4. Bridle Bracket
5. Coil Skid
6. Smith Fire-Cracker Coil
7. Bakelite Coil Mount
8. Switch Bracket
9. Ignition Switch
10. Condenser
11. Battery Clamp

And all necessary screws, washers, wires and hook-up details.

The *PROOF* in Competition:

C. A. Kean, Brownsburg, Ind., 107.41 MPH at Detroit Nationals, Aug. 3rd.

H. Harrison, Plainfield, Ind., 105.14 MPH at Waukegan, Ill., Sept. 1st.

Joe Gaebler, Indianapolis, Ind., 104.77 MPH at Waukegan, Ill., Sept. 1st.

Mel Knell, Champaign, Ill., 100 MPH at Waukegan, Ill., Sept. 1st.

Joe Olender, Indianapolis, Ind., 101.67 MPH at Lafayette, Ind., Sept. 2nd.

Speedway Model Craft Div.
Standard Machine Works, Inc.
1327 N. Capitol Ave.
Indianapolis, Indiana

Write us for the name of your nearest dealer.

Constance and Wesley Mueller, undersea explorer-photographers (and X-acto fans from 'way back!) snapped this picture of themselves with two of their special fish friends who follow them from reef to reef along the ocean floor! (Yes! That *is* a shark!)

THEY EXPLORE THE OCEAN FLOOR

. . . and find a hundred uses for X-acto

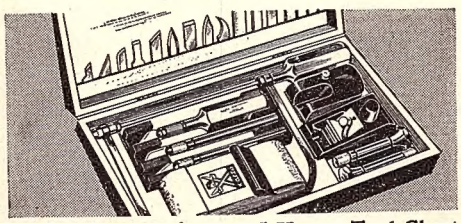
THERE'S never a dull moment in the sea-going life of the Muellers. They run their own 40-foot cruiser, do their own diving, take their own photographs, and coax the "monsters" of the deep to pose for them.

In their laboratory, in designing and repairing their equipment, in preparing their photographs for publication, they "encounter a hundred jobs requiring implements for delicate as well as heavy cutting." And that's a hundred jobs for X-acto! In fact, say these exacting scientists, "X-acto Knives have now replaced a nondescript group of tools we formerly used, because we found them *stronger, safer, keener.*"

13 Blade Shapes Quickly Interchangeable!

Landlubbers, too, find X-acto Knives do their hobby and business cutting jobs, quicker, better and *easier.* With 3 *all-metal* handle styles (*No more substitute plastics!*) and 13 different blade shapes, X-acto is always scalpel-sharp, always ready. Amateurs or experts . . . whittlers, model builders, sculptors in paper, wood or plastics . . . choose X-acto for fun *and* best results.

ALL METAL
X-acto No. 2 Solid Duraluminum Knife . . . **50c**
With 5 assorted blades, **$1.** Other X-acto Knives, Tools, Chests, **50c** to **$12.50.**



It's Got Everything! No. 85 X-acto Tool Chest —3 all-metal knives; full assortment of blades; saw; sander; stripper; planer; drills and holders; steel ruler; complete in wooden chests, $12.50.

X-acto* **KNIVES & TOOLS**

At hardware, hobby and gift shops.

X-acto Crescent Products Co., Inc., 440 Fourth Ave., New York 16, N. Y. In Canada: Handicraft Tools, Ltd., Harmant Bldg., Toronto

Reg. U. S. Pat. Off.

SATISFIED READER

Thought you'd be interested in knowing that I was very pleased with the "Baronet" of recent issue. Enclosed is a small photo of my finished skeleton. Here's hoping for some more of Powell's models in the future. . . . *Thomas Treacy, L. A., Calif.*

ANOTHER TINPLATER

Hope you will continue with Mr. Hertz' Along the Tinplate Track, as this is the best part of your mag. Of particular interest to me are your pictures of trains and their construction, I can really relax studying them. . . . *R. Saxon, Falmouth, Ind.*

"SNAFU"

Let's drink a toast or something to R. Grooms and B. Crosby, both of them threw a beef in the February issue. I think is it time that more of us do the same as far as model shops and clubs are concerned.

I, too, am a newcomer to model railroading and there are plenty of things I don't know about it. You say, "Buy a book on it"? Well, over two months ago I sent away three dollars for one, and it seems as though Clark Gable isn't the only thing "gone with the wind". I stopped at model shops around Cleveland and in a lot of them their biggest trade is model airplanes. If there happens to be a number of these "bugs" who go for model planes in the store at the time, the shop owners aren't particularly interested in trying to give you any help. If they don't have what you want, they very rudely tell you so and ignore you from there on. If you are interested in a gauge which they aren't, again you realize you have wasted your time. I stopped in the model railroad club here and the courtesy extended me there wouldn't speak well for anyone. In fact I wish I had the same atmosphere in my ice box.

The biggest trouble with most "Hobby Shops" is the fact that they attempt to (please?) too many kinds of customers. In other words, if you are after what they sell the most of you are more than welcome. Model railroad equipment manufacturers ask you to go to our dealers. I think if we could go to them directly instead of these so-called hobby stores that model railroading would grow by leaps and bounds. I am beginning to get kind of disgusted and it won't take much for me to go tinplate. So let's hear from more of you disgusted fans. Maybe we can form a club of our own or else buy our own model shop. . . . *Geo. Mack, Cleveland, Ohio.*

THE MODEL CRAFTSMAN

Including "THE MODELMAKER" and MINIATURE RAILROAD Magazine—Established 1924

Contents

RAILROADS

Speaking of Water Falls—By L. Bartholomew 23
Along the Tinplate Track—By Louis H. Hertz 25
Model Church—By R. Ovresat 26
Interlocking Plant—By J. R. Hume ... 29
Locomotive Traveling Crane—By Willis Nye 34
Short Baggage Car—By John R. Barkley 36
New Haven Railroad 38
Stationary Steam Engine — By Lewis Austin 40
Pike Registry 33
Santa Fe Lines 33
Model RR Club News 6

RACE CARS

Race Car News 43, 58
Present Speed Records 47

MODEL AIRCRAFT

Folding Props—By H. A. Thomas 9
"Anzac"—By Claude McCoulough 10
Victory Nationals 14
"Phantom" 19
Model Plane News 20

EDITOR AND PUBLISHER *Charles A. Penn*

MANAGING EDITOR *Robert W. Thompson*

MODEL RAILROAD EDITOR *Lewis Austin*

MODEL AIRPLANE EDITOR *Leon Shulman*

RESEARCH EDITOR *Louis H. Hertz*

Field Editors: Railroads—L. W. Sagle, H. L. Adams. Race Cars—C. A. Penn

Published monthly by Model Craftsman Publishing Corp., 1309 Noble St., Phila. 23, Pa. Editorial, advertising, executive offices, Ramsey, N. J. Charles A. Penn, President and Treasurer. Helen M. Penn, Secretary. Entered as second class matter May 3, 1945 at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Price 25c per copy. Subscription $2.50 per year in the United States and Possessions; foreign and Canadian subscriptions $3.50 per year.

Manuscripts not accompanied by return postage cannot be returned. The contents of this magazine must not be reprinted without permission.

Copyright 1946 by Model Craftsman Publishing Corp.

OCTOBER, 1946 Vol. 15, No. 5

PEN FRIEND WANTED

I am a yearly subscriber to your fine magazine, 16 yrs. old, and very interested in model railroading. I have a small layout in O gauge and a few locos, etc., but cannot obtain enough dope or photographs of American locos or freight vans. I would be grateful if some American model railroader would become my penfriend and help me out. . . . *Milton Barlow, 37A Broughton St., Concord Sydney, N.S.W., Australia.*

LIKES LIVE STEAM

I was agreeably surprised to open the July issue and see plans for a stationary engine. Keep up the idea, we like it! We don't care how much space this or that gets, just as long as we are not forgotten! . . . *Geo. T. Burgess, Independence, Mo.*

BAD BUSINESS!

I've been a reader of MC for over one year now and am writing to let you know that I like the mag. I have one complaint to make which a fellow reader made in the Feb. issue. I have written to several of your advertisers for information enclosing money orders to cover postage, etc. I have received only one reply to date. All letters were posted at least six months ago. This, in my opinion, is "bad business" policy and should not be allowed to be continued.

I would like to get in touch with someone in the New York or Chicago districts who is also interested in Railroading. I am 22 years old. . . . *Frank A. Phillips, 31 Plymouth St., Enfield, Sydney, Australia.*

WHY NO BLUE-PRINTS?

Where, oh, where have the blue-prints gone????? (sung to the tune of "Where Has My Little Dog Gone?"). As issue after issue of MC comes out, I look for, and am usually disappointed in not finding, any signs of the blue-prints which were such an interesting and worthwhile part of the magazine, particularly when they pictured interurbans.

Can't you possibly squeeze them in as you did in earlier issues, and also make them easily removable for insertion in one's plans book? . . . *R. S. Galbraith, Pittsburgh, Pa.*

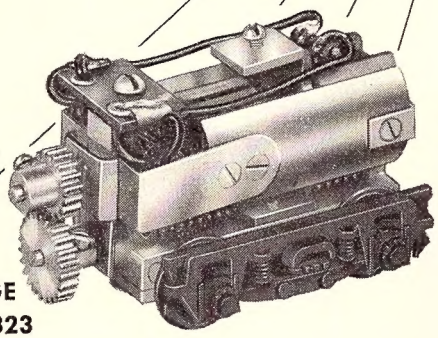
(The paper situation right now is very acute, handicapping us with any ideas such as these at present.—Ed.)

GRIPES A'PLENTY

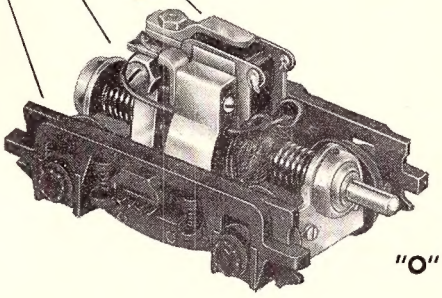
I have just bought a copy of the July issue of MC and was really disappointed. This, in my opinion, was the worst issue in several years. My model railroad is a trolley line and I found but one article that interested me.

There are several ways that you could improve your magazine, and start it by publishing a separate railroad mag. There is room for another good one. You could also use a few new authors, surely there must be other model railroaders who can write. In the car barn, why not publish one plan every issue of freight or passenger cars, buildings, or yard layouts. Due partly to the pioneering of your magazine, there are many more model trolley lines than there used to be, and should be given more attention. . . . *R. Steffy, Youngstown, Ohio.*

THINGS TO COME



"OO" GAUGE
Replacing K2323



"O" GAUGE

by Scale-Craft

Motorized truck kits to give your system greater, diversified motive power. These versatile trucks, that are suitable for trolley, diesel, gas, electric or interurban service, are rolling out of the Scale-Craft roundhouse. The "OO" gauge trucks will be at your dealer's within the next thirty days. This is one of the *many* sensational new products engineered and developed by Scale-Craft.

The production line at Scale-Craft is highballing out of the last reconversion curves. Steaming down the mainline, Scale-Craft is rapidly approaching full throttle to bring you an enlarged and complete line of Quality Model Railroad Kits and Accessories.

See the "OO" GAUGE at your dealer's
"O" GAUGE to follow later.

SCALE-CRAFT
WORKING MODELS

SCALE-CRAFT & CO.

LIBERTYVILLE • ILLINOIS

BUY FROM YOUR LOCAL DEALER—HELP HIM TO BE OF MORE SERVICE TO YOU

BEST BUY BY FAR

because

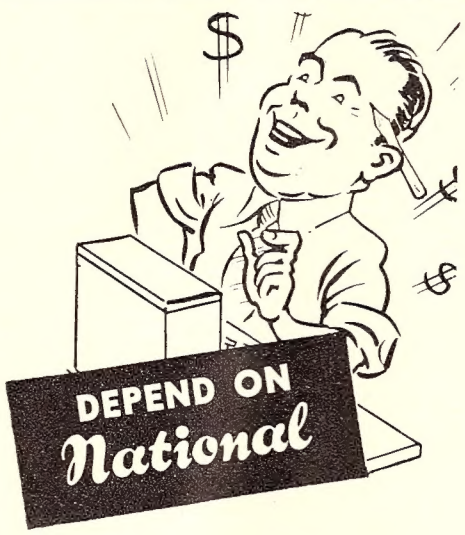
You'll agree there's no substitute for a Midlin Semi-Assembled Track Kit. Midlin's exclusive milled slot method of attaching metal track to wooden ties -- far superior to the conventional spike method -- insures proper spacing, eliminates the nuisance of a track gauge, protects against derailments.

Formerly available at $6.00 per Kit, rising costs have increased the price to $7.00. Nevertheless, you'll agree that the Midlin Semi-Assembled Track Kit is still -- the "best buy by far."

ORDER FROM YOUR MIDLIN DEALER

MIDLIN MODELS
SCOTCH PLAINS, N.J.

Hobbycraft Customers Too, Like to Hear Your Cash Register Sing!

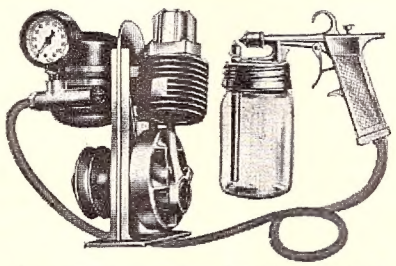


Sure they do. When you ring up a sale that means your customer got what he wanted. He's happy! You are happy. And that's where National comes into the picture, because successful hobbycraft dealers are depending on National to keep them supplied with the goods their customers want — they get prompt shipment of not only the steady-selling old standbys, but the new things too — when they are new — kits and supplies, tools, gadgets and what not. Now over 2500 fast-selling, advertised items in National's newest Check List, plus the very newest releases and forthcoming items in supplementary lists — every month or so. Write National today.

A NATIONAL SCOOP

Rush Orders for This
New Portable Paint Sprayer Outfit
HANDY JOE COMPRESSOR
HANDY MIKE SPRAY GUN

Here is what thousands of hobbycraft fans have been waiting for—a small, inexpensive, portable all-purpose compressor and spray gun. It fills a long felt need for painting and other spraying lobs around the house and for regular use in the home work shop Weighs only 7¼ lbs. Stands 9 inches high. Works with pressures of 20 to 35 lbs. Run it with any ¼ h.p. motor.



LIST PRICES—Complete (Less Motor) $22.20
Compressor $14.50—Spray Gun $6.00
12½ ft. hose $1.70

NATIONAL MODEL DISTRIBUTORS
150-156 N. WACKER DRIVE · CHICAGO, 6

RAILROAD CLUB NEWS

WEST ENGLEWOOD, N. J. The Mystic Knights of the Rusty Rail, 290 W. Englewood Avenue, now have two contemplated layouts, both "HO" and "O" gauge, is in hopes of soon starting the "HO" line. They have a few prospective members under way but could use several more if anyone is interested.

The "HO" members of this club have standardized all West Town Auto couplers, for they couple with dummys and look good. With all due credit to the NMRA on its standards, these boys are of the opinion that the NMRA fouled up badly on the "HO" Auto Coupler situation. Anybody else agree or disagree? Several of us boys were "up the creek" when we used automatic couplers from companies which folded up like accordions leaving us strictly holding the bag. Then to, some of those which were used by some of our members were very unrealistic in appearance. If all manufacturers were to make auto couplers to AAR standards, likely West Town, this wouldn't happen.

PELHAM MANOR, N. Y. The Westchester Model Club is holding their annual exhibition of model railroading in the Pelham Manor station of the New Haven Railroad on the first three week-ends in November. The exhibition will be open to the public on Friday evenings, and both Saturday and Sunday afternoons and evenings. Nov. 1st, 8th and 15th—Fridays from 7:30 P. M. to 10:00 P. M. Nov. 2nd, 3rd, 9th, 10th, 16th and 17th—Sat. and Sun. from 2:00 P. M. to 10:00 P. M. Judging from past experience, this exhibition should prove well worth your while.

DANVERS, MASS. The Fourteenth Annual Meeting of the "Brotherhood of Live Steamers" will be held under the auspices of the New England Live Steamers, Inc., at 90 High St., Danvers, Mass., Oct. 4th, 5th and 6th. This year, in addition to the original 600 ft. loop of 2½ in. and 3½ in, there will be a new 750 ft. loop laid to 3½ in. Les Friend has again kindly offered to pick up any engines that are sent by freight or express. These should be sent to Friend Box Co., 90 High St., Danvers, Mass., notifying him in advance of their shipment.

CLEVELAND, OHIO. A new group of railroad fans have been organized under the name of the Greater Cleveland Railfans. Drawing its members from the Greater Cleveland Area, the group is planning fan trips and photographic trips to points of railroad interest in this district. Currently, the members are all model railroaders and meetings are being held at the homes of the members with no plans for the construction of a club layout. Information can be obtained from L. M. Greasel, Sec., 2562 Canterbury Rd., Cleveland Ht. 18, Ohio, or by phone at FA 4606.

BALTIMORE, MD. The Baltimore Society of Model Engineers just announced the dates for their Xmas Shows to be held on week-ends, starting Dec. 14th-15th, and to be open to the public on Dec. 21st-22nd, Dec. 28th-29th, Jan. 1st, 4th and 5th.

KIRKWOOD, MO. The Missouri Central Model Railroad Club organized just about a year and a half ago at the home of Richard Wegner. After eight months of operation, the layout had to be dismantled and moved. At this time, conversion to scale took place, with disposition of their old tinplate material. New track was ordered and paid for from the sale of the old equipment.

The club now boasts of about 60 pieces of rolling stock, including five steam locos, one gas electric job and two diesels. Fifteen passenger cars and thirty-five freights complete their roster.

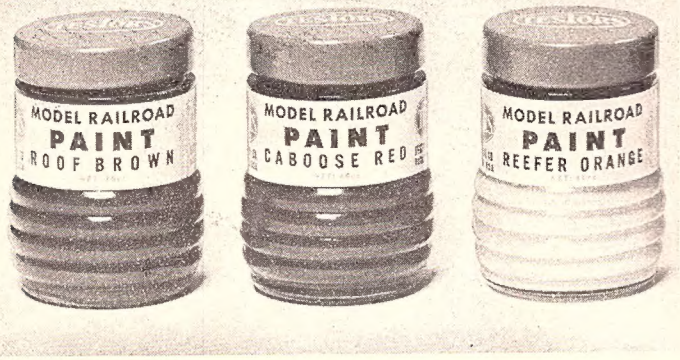
SANTA BARBARA, CALIF. The Channel RR Club just voted to change their weekly meeting nights from Thursday to Friday, starting Sept. 6th. Along with this change came announcement of a new monthly show time to the first Friday or regular meeting night of the month. Shows usually run from 7 to 10 P. M.

Their regular show held in August had to buck the "Fiesta" crowd, but in spite of this came off very successfully. Lou Cameron's O gauge Southern Pacific "Daylight" train again proved top performer of the show.

ATTENTION!

Say, fellows, how about sending in pictures and remarks on your pet models? Let the other fans see what you're doing!

FOR THOSE WHO WANT THE *Best...*



PRESENTING THE NEW

SUPER-QUALITY

LINE OF

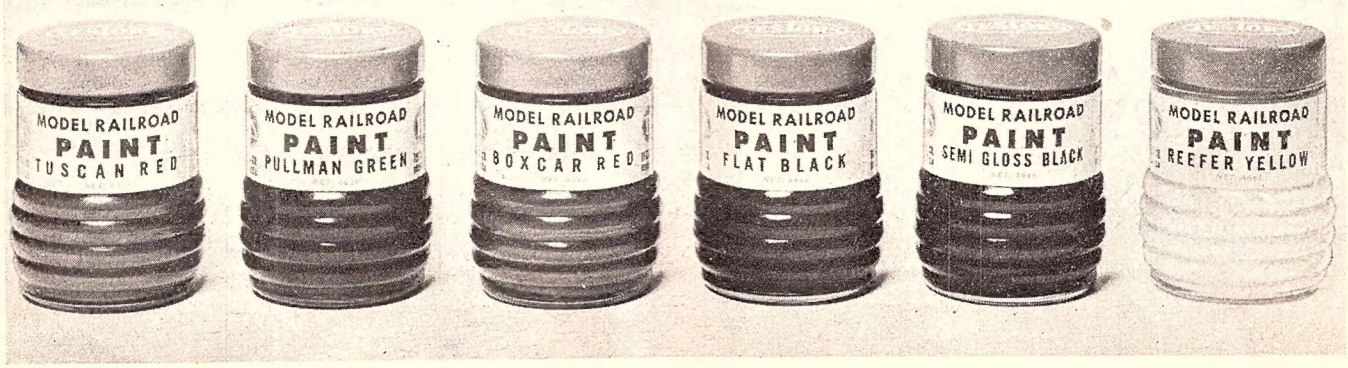
TESTORS

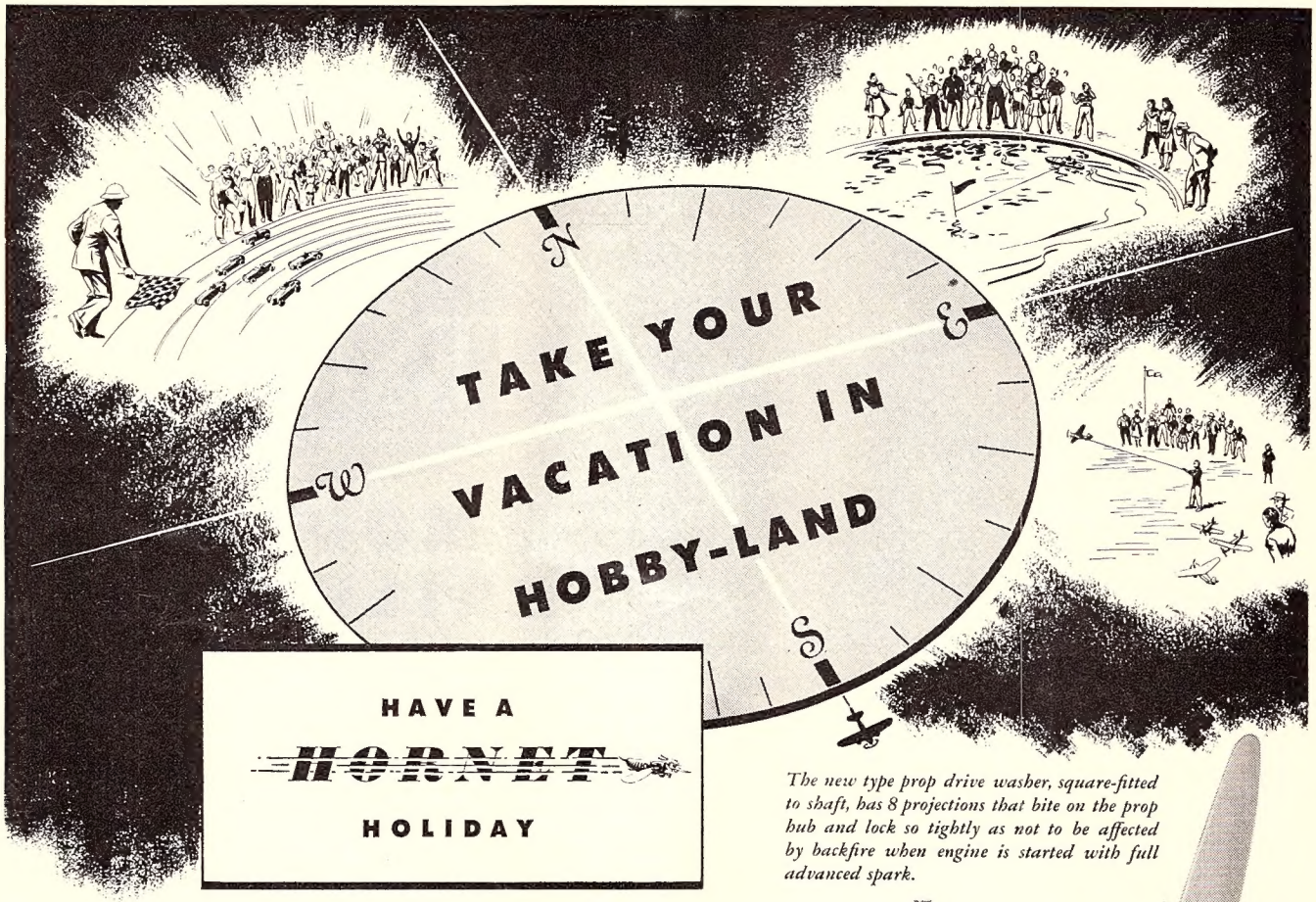
MODEL RAILROAD PAINTS

Now! After months of laboratory research, testing, and development . . . Testor brings you a new and truly superior line of Model Railroad Paints! Created for craftsmen who want — and are willing to pay for — the best, these outstanding enamel finishes have no equal on the market today. They're easy to apply by brush or spraying . . . require no primer, and provide complete one-coat coverage . . . dry in two to three hours without brush marks or sags . . . have that "weathered glossy" finish so desirable for authentic appearance. Try these Testor super-quality paints now! Your dealer has them in stock . . . or will be getting them as soon as national distribution permits.

Sold only in this distinctive container designed exclusively for Testor's . . . **50¢** EACH

TESTOR CHEMICAL COMPANY
ROCKFORD, ILLINOIS


MODEL RAILROAD PAINT TUSCAN RED
MODEL RAILROAD PAINT PULLMAN GREEN
MODEL RAILROAD PAINT BOXCAR RED
MODEL RAILROAD PAINT FLAT BLACK
MODEL RAILROAD PAINT SEMI GLOSS BLACK
MODEL RAILROAD PAINT REEFER YELLOW



HAVE A
HORNET
HOLIDAY

Wherever the miniature aircraft, speedboats and race cars streak away, there's true sport for the HORNET owner. This mighty mite made the records and continues to make them. The HORNET is king in Hobby-land.

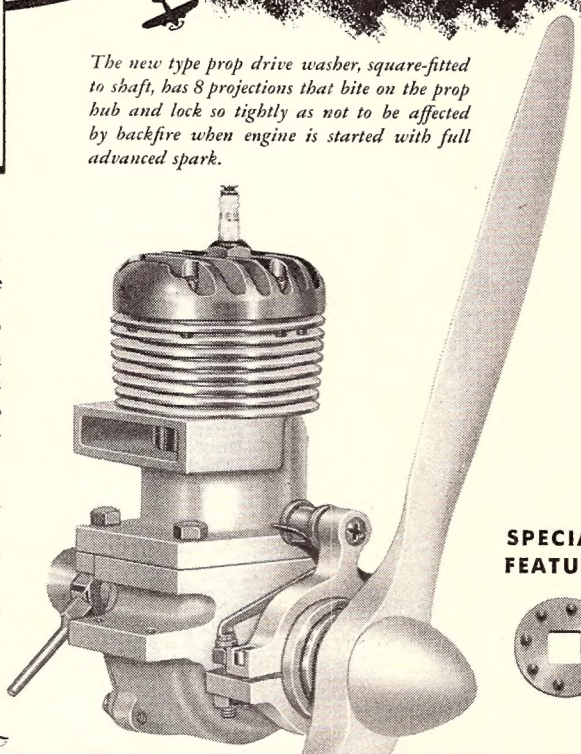
Lightning fast, powerful and rugged, the HORNET is designed by masters for mastery . . . built with skill and precision, of the finest materials. Match it against the rest and prove that it goes faster, develops more power per pound of weight, and lasts longer.

HORNET engines carry a 90 day guarantee against defective workmanship or parts breakage . . . render top performance for years.

Still at pre-war prices: Complete except for Coil-Condenser and Spark Plug . . . $35.00

Model "60-A" for guide line or free-flying planes.
Model "60-B" for boats. Model "60-RC" for race cars.

The new type prop drive washer, square-fitted to shaft, has 8 projections that bite on the prop hub and lock so tightly as not to be affected by backfire when engine is started with full advanced spark.



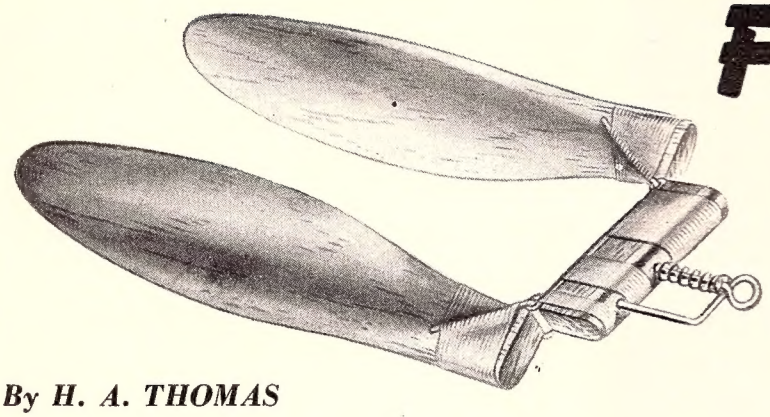
SPECIAL FEATURE

HORNET
"WORLD'S GREATEST RECORD HOLDERS"
MOTORS
3849 VENTURA BOULEVARD
FRESNO, CALIFORNIA

HORNET VICTORIES! Results of the Lockheed Contest April 14, just announced are as follows: SPEED CLASS C—1st, George Berry, 119.84 m.p.h., HORNET: 2nd, Clarence Benskin, 118.80 m.p.h., HORNET: 3rd, Bob Smith, 117.02 m.p.h., HORNET.

If your local hobby dealer does not have HORNET motors in stock, we will ship direct from factory within 24 hours of receipt of order. Send your name and address and those of your hobby dealer with order. California purchasers add 2½% Sales Tax.

FOLDING PROPS



By H. A. THOMAS

THOUSANDS of modelers of all ages have mastered the intricacies of rubber model construction. They are able to produce light, strong wing and fuselage frames of modern design with taut, neat covering jobs. But the feature which sets the expert apart from the rest is his propeller. It is generally agreed that the construction and adjustment of a folding rubber model propeller with rubber tensioner is one of the most difficult tasks to be encountered in any phase of model building. There is no way of avoiding the job either, if real top-flight performance is the goal. There is little in the way of ready-made merchandise to be purchased as accessories for rubber models; it is up to the builder to make his own!

A simple check into past winners of Moffet and Wakefield national events reveals how consistently the designs are built around efficient propellers. Korda, Cahill, Nelder, Naudzius, Lidgard, Lanzo, Zaic and others have contributed in the development of rubber model propellers as we know them today.

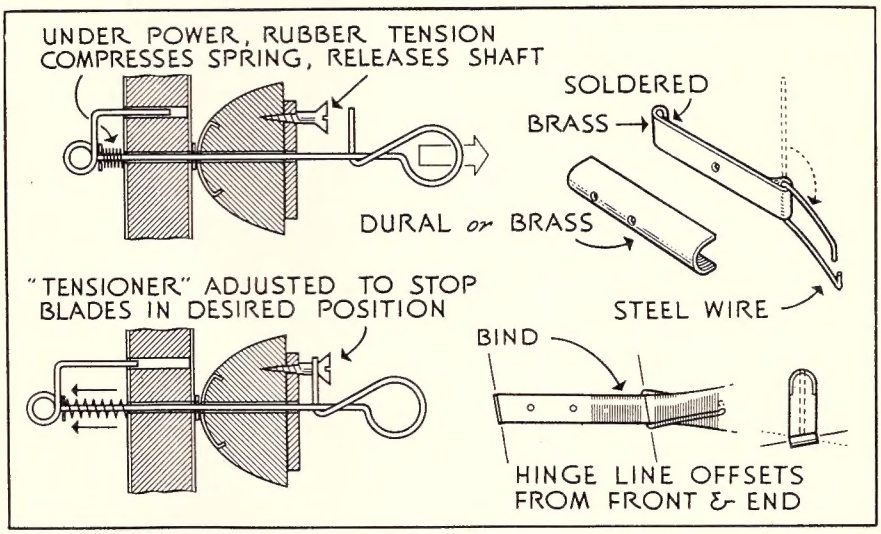
One and two-blade designs are both still popular. Construction is identical, however, except for the addition of the wire arm and counterweight which replaces one blade. Pitch, diameter and blade area tie in with the amount of rubber to be used in governing power and duration; the model may either climb slowly for a lengthy period or it may zoom upstairs in a hurry. The hinges themselves present the only difficult part of the construction. The location of the hinge line and the slight angular offsets in it determine whether the blades will fold flush or not. Hinges must be free, yet without play or looseness. It is wise to mark the proposed hinge line and complete the mechanism before cutting the blades apart from the hub section.

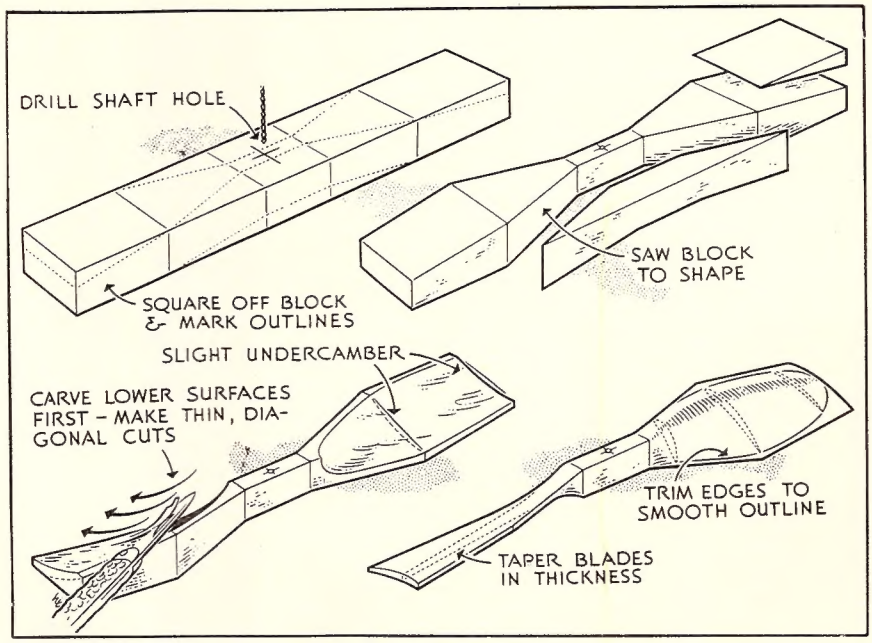
Sheet metal and wire parts must fit perfectly for best results. If the first shaft cannot be superimposed over the full scale drawing of it, toss it aside and bend another one. Soldered connections should be neat and strong. Excess solder may be filed away but never at the risk of weakening the connection.

Every effort should be made to achieve a compact assembly. Bind the hinges with silk thread neatly and countersink every part possible to make the hub section smooth and clean. Wood filler can be applied liberally to the entire propeller. Repeated coats of it with thorough sanding between is necessary for a strong, smooth finish. The larger types of rubber model props are often silk-covered for extra strength.

The tensioning mechanism need not be complex. A simple type in which lessening motor tension permits the spring-loaded shaft to move forward and its end to engage the wood screw head in the rear of the nose plug is the most popular. The purpose of the rubber tensioner, in the first place, is to maintain a few turns on the motor, preventing it from slackening completely, shifting within the fuselage and upsetting longitudinal trim. In this manner, a much longer motor can be used.

When pre-war quality rubber is again available, rubber models are certain to attract an increased following with consequently greater support from the model industry. Then we may expect the manufacturers to provide us with ready-made plastic propeller blades, machined magnesium folding mechanisms and all the other accessories which must necessarily be hand-made now. In the meantime, we can turn in championship flights by mastering the construction of folding propellers.




DRILL SHAFT HOLE
SAW BLOCK TO SHAPE
SQUARE OFF BLOCK & MARK OUTLINES
SLIGHT UNDERCAMBER
CARVE LOWER SURFACES FIRST - MAKE THIN, DIAGONAL CUTS
TRIM EDGES TO SMOOTH OUTLINE
TAPER BLADES IN THICKNESS

Anzac

By CLAUDE McCULLOUGH

BUILDERS of the Anzac should be certain to have their scooters handy when test flying this high-climbing job, for it has a decided propensity for hopping off on a cross-country on very short motor runs. Finished the night before a contest, it was lost on a test flight before weighing-in began. After this had happened at a second meet, it was decided to forego trials on contest days and by such strategy, we managed to keep it around long enough to cop a fine first place trophy.

Construction is strong and rugged, yet simple enough to offer no difficulty to beginners. Any class C engine in the .60 cubic inch range will yank the Anzac skyward with plenty of zip in a winding, vertical climb that gobbles altitude with the best of surrealistically streamlined gassies.

The plans are easily scaled up with dividers or an ordinary ruler, multiplying by four. Build the two fuselage main frames, one on top of the other, from ¼" square balsa. When thoroughly dry, remove from the plan and cut apart where they have become attached at the joints. Install the cross braces at the front and cement together at the rear, then add all remaining braces. Build up the pylon from a ¼" sheet balsa frame planked with ⅛" hard balsa sheet. Sand to streamline shape and notch its bottom to fit into the cross braces on the fuselage top. Cement thickly to the braces and "fill-in" the fuselage top with snugly fitted pieces of ¼" sheet balsa planking. Plank the sides and bottom with ⅛" flat and cement the ⅛" square longerons down the fuselage sides. The tail block is cut from a scrap balsa block. Using several coats, cement in the tail hooks, wing hooks and firewall pegs. The fuselage is faced with 1/16" plywood.

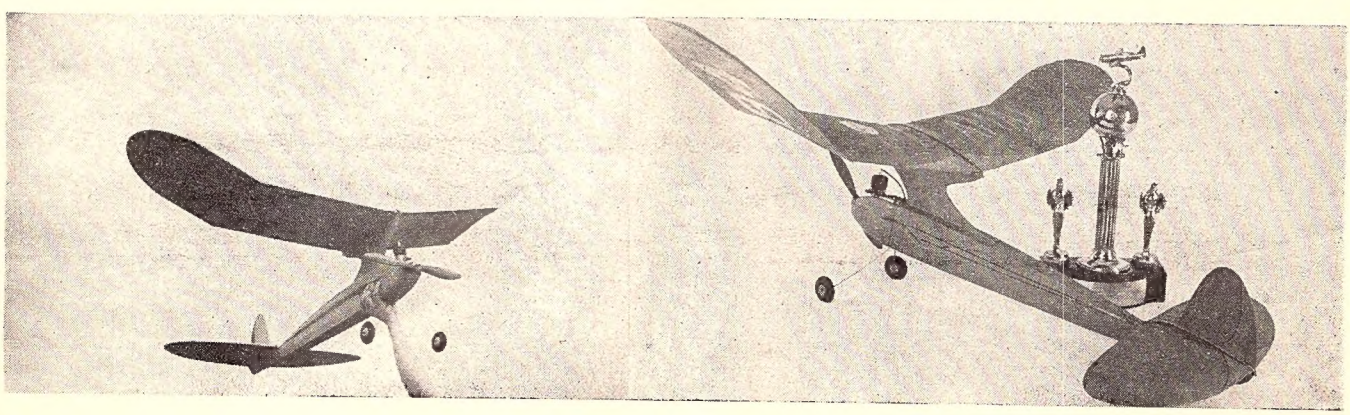
The firewall is ¼" plywood to which is bolted the ⅛" steel wire landing gear and the motor mounts of aluminum or galvanized sheet metal of fairly heavy gauge. The cowl is balsa, either built-up sheet or carved block and is fitted to the particular motor used. The ignition components are fastened to a ¼" by ½" plywood track. Firewall, engine and track are removable and are held in by rubber bands and hooks.

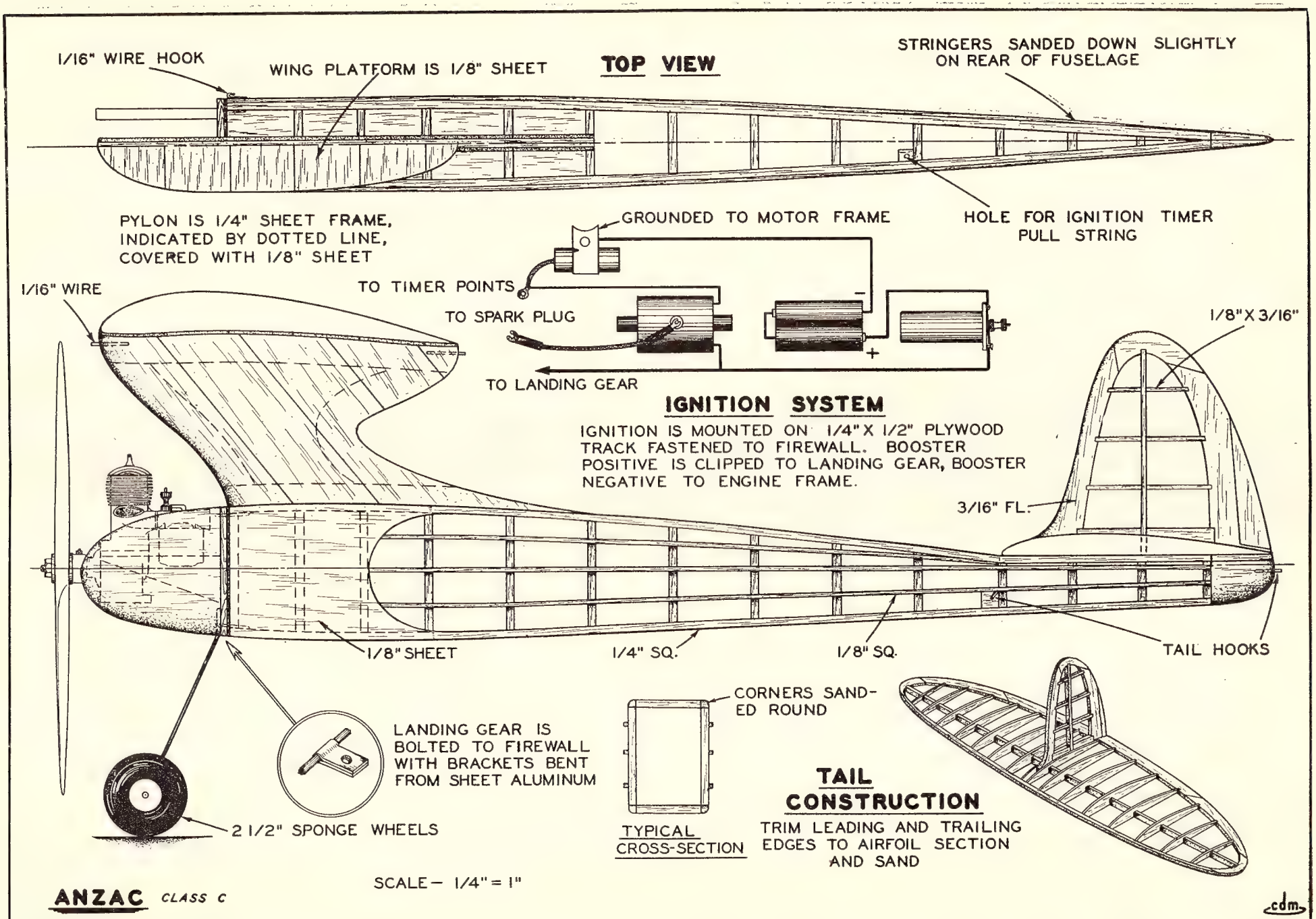
Cut the wing ribs from 1/16" sheet balsa. Slide the ribs over the ⅛" hard balsa spars and cement in place. Add the leading and trailing edges and the ¼" sheet wing tip sections. Plank the center section on the top between ribs "C" and on the bottom between ribs "B" with 1/16" flat sheet. Add dihedral as indicated on the plan. Carefully trim the wing edges to airfoil shape and sand with fine sandpaper.

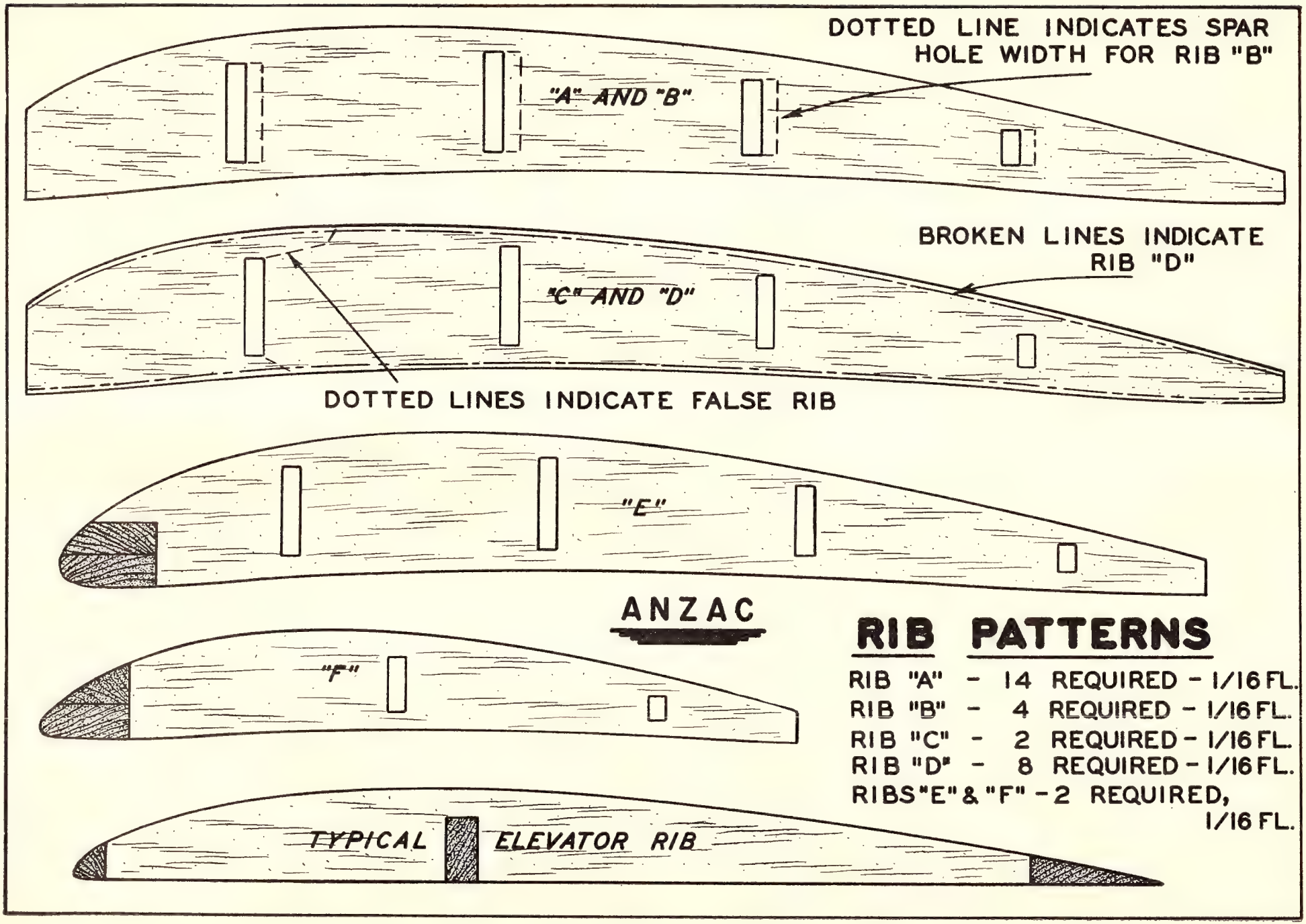
The rudder and elevator are easily removable by means of rubber bands. The rudder is built up from 3/16" flat and ⅛" by 3/16" crosspieces and sanded to streamline shape. The adjustment tab is hinged with a piece of heavy silk. Elevator construction is conventional. The leading edge should be soaked in hot water before bending to the elliptical curve.

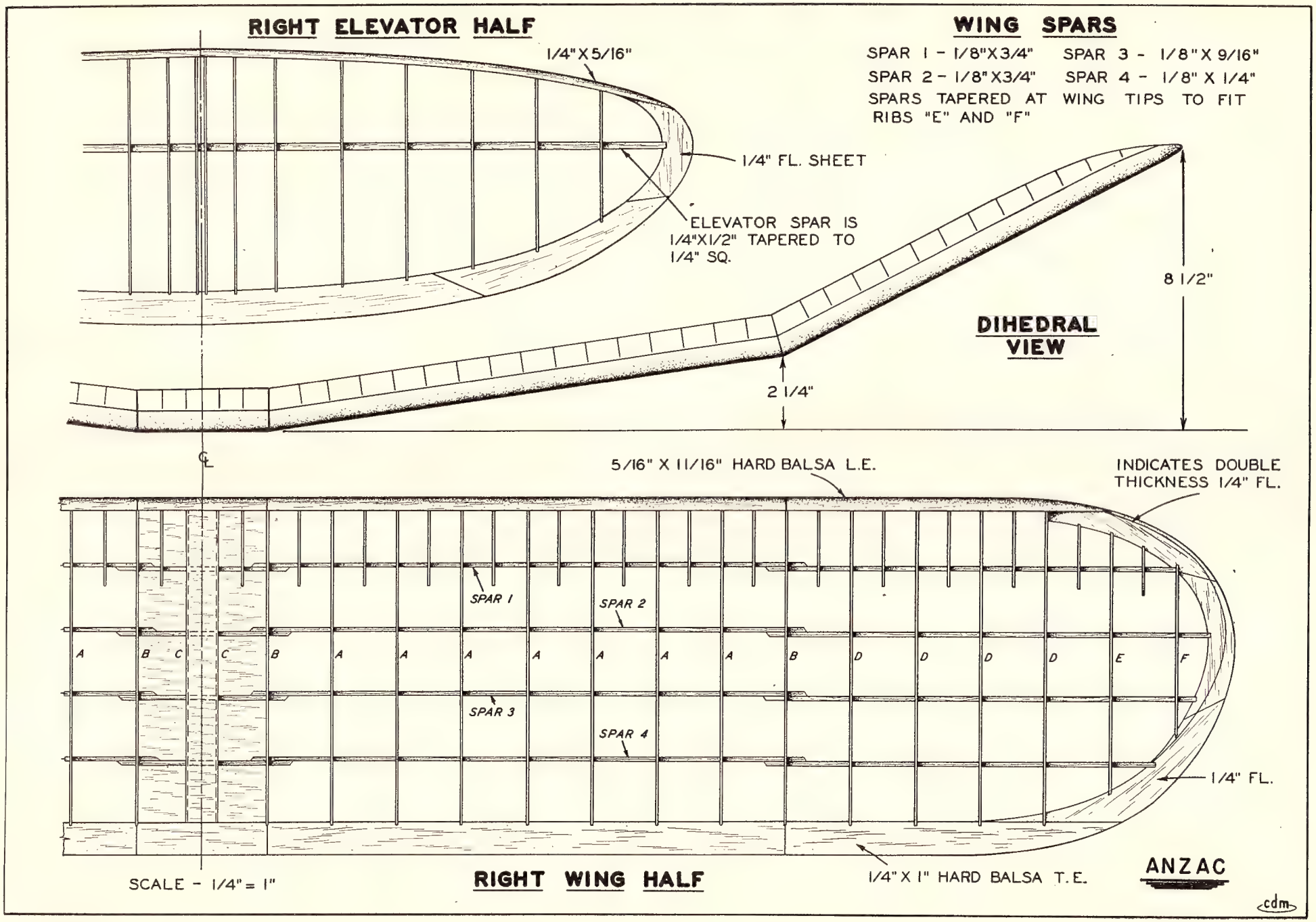
Cover the plane with silk or gas model silkspan paper and give it at least three coats of clear dope to fill the covering pores. A decoration scheme may be added with colored dope and masking tape and pin striped with a drafting pen.

Test gliding should indicate any balance misalignment and this may be corrected by sliding the ignition parts on the track. Keep the motor throttled on the first flights, successively increasing speed until proper spiral settings are obtained.




1/16" WIRE HOOK
WING PLATFORM IS 1/8" SHEET
TOP VIEW
STRINGERS SANDED DOWN SLIGHTLY ON REAR OF FUSELAGE
HOLE FOR IGNITION TIMER PULL STRING
PYLON IS 1/4" SHEET FRAME, INDICATED BY DOTTED LINE, COVERED WITH 1/8" SHEET
GROUNDED TO MOTOR FRAME
TO TIMER POINTS
TO SPARK PLUG
TO LANDING GEAR
1/16" WIRE
IGNITION SYSTEM
IGNITION IS MOUNTED ON 1/4" X 1/2" PLYWOOD TRACK FASTENED TO FIREWALL. BOOSTER POSITIVE IS CLIPPED TO LANDING GEAR, BOOSTER NEGATIVE TO ENGINE FRAME.
1/8" X 3/16"
3/16" FL.
1/8" SHEET
1/4" SQ.
1/8" SQ.
TAIL HOOKS
LANDING GEAR IS BOLTED TO FIREWALL WITH BRACKETS BENT FROM SHEET ALUMINUM
2 1/2" SPONGE WHEELS
CORNERS SAND-ED ROUND
TYPICAL CROSS-SECTION
TAIL CONSTRUCTION
TRIM LEADING AND TRAILING EDGES TO AIRFOIL SECTION AND SAND
SCALE— 1/4" = 1"
ANZAC CLASS C
cdm


DOTTED LINE INDICATES SPAR HOLE WIDTH FOR RIB "B"
"A" AND "B"
BROKEN LINES INDICATE RIB "D"
"C" AND "D"
DOTTED LINES INDICATE FALSE RIB
"E"
ANZAC
"F"
RIB PATTERNS
RIB "A" - 14 REQUIRED - 1/16 FL.
RIB "B" - 4 REQUIRED - 1/16 FL.
RIB "C" - 2 REQUIRED - 1/16 FL.
RIB "D" - 8 REQUIRED - 1/16 FL.
RIBS "E" & "F" - 2 REQUIRED, 1/16 FL.
TYPICAL ELEVATOR RIB

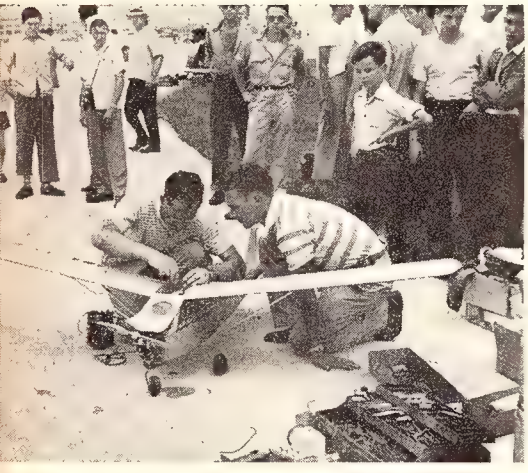

RIGHT ELEVATOR HALF
1/4" X 5/16"
1/4" FL. SHEET
ELEVATOR SPAR IS 1/4"X1/2" TAPERED TO 1/4" SQ.
WING SPARS
SPAR 1 - 1/8"X3/4"
SPAR 2 - 1/8"X3/4"
SPAR 3 - 1/8" X 9/16"
SPAR 4 - 1/8" X 1/4"
SPARS TAPERED AT WING TIPS TO FIT RIBS "E" AND "F"
8 1/2"
2 1/4"
DIHEDRAL VIEW
5/16" X 11/16" HARD BALSA L.E.
INDICATES DOUBLE THICKNESS 1/4" FL.
SPAR 1
SPAR 2
SPAR 3
SPAR 4
A B C C B A A A A A A A A B D D D D E F
1/4" FL.
1/4" X 1" HARD BALSA T.E.
SCALE - 1/4" = 1"
RIGHT WING HALF
ANZAC
cdm

The "Tite Line Fliers Club" of Texas, prepare their models for competition in control-line events. Left to right we see W. M. Ross, Carl Huddleston, Pat Kelley, Robert Kork Kelley and Jack Faley.

VICTORY NATIONALS

WITH the roar of engines and models soaring overhead, the Victory Nationals got under way as promised on August 30th. The setting for all this noise and balsa shavings was Wichita, Kansas, about the most centrally located town in good old U. S. A. The meet was sanctioned by the AMA and sponsored by the Wichita Kiwanis Club and YMCA. Despite limited time (roughly 60 days), funds and personnel, Wichita decided to play host to the Nation's model plane builders, and did a bang-up job, under the management of Al Hummel and directed by James F. McClelland, Jr.

Four different flying sites were used to better accommodate the varied events—Crestview Lake for R. O. W. gas models, the Wichita Forum for indoor events, Rawdon Field for Free Flight outdoor events and the Boeing B-29 parking ramp for Control Line and Radio Control events. Full schedule of events follow: Aug. 29th — Registration, Contestants' meeting, Radio Control meeting and Line Control Stunt meeting. Friday, Aug. 30th — All indoor events: Processing, Hand-Launched Stick, R. O. G. Cabin, R. O. W. Cabin, Autogiro, Helicopter, Ornithopter, Hand-Launched Glider. Outdoor events: R. O. W. Gas, Radio Control, Control Stunt, Control Speed (any class), Closed meeting of AMA. Saturday, Aug. 31st: Class A Free Flight Gas, R. O. G. Cabin Rubber Powered, Radio Control, Control Stunt, Control Speed (any class), Nominating Committee dinner and meeting, Open meeting Contest Board AMA, Best Finish and Flying Scale. Sunday, Sept. 1st: Class B Free Flight Gas, Hand Launched Stick, Rubber Powered, Outdoor Autogiro, Outdoor Helicopter, Outdoor Ornithopter. Control Stunt, Control Speed (all classes), Radio Control, Jet-propelled exhibition. AMA leader members annual meeting. Monday, Sept. 2nd: Class C Free Flight Gas, Hand Launched Glider, Towline Glider, Radio Control, Control Stunt, Control Speed (all classes), Radio-Control exhibition. Victory Buffet Dinner for contestants.



Jim Walker of Portland, Ore., makes a last minute adjustment on his Radio-Control model before launching it on his winning flight.

Housing the many contestants was a tremendous problem due to limited facilities, with all the boys scattered throughout the town's leading hotels.

For the first time, a Rise-Off-Water event was held for gas models at Crestview Lake. It proved an ideal location, being a lake of roughly 500 feet in diameter, sufficiently deep to accommodate such models. Its size permitted the models to take off with ample room for a long take-off run, and gave them the advantage of the thermals surrounding the lake and still land on the grass around the area. The R. O. W. event was held for all classes of gas models combined, taking place on the first day of the meet. Events started at 1 P. M. and ran until 6 P. M. allowing all contestants to get their required flights. The day was ideal with a breeze of approximately 5 MPH blowing. The models drifted very little while flying, and this lack of breeze required the models to make a long take-off run before being air-borne.

Model and pontoon designs were none too radical except for a three-pontoon affair with the large pontoon located where a single wheel would normally be located, the two smaller ones suspended from the stabilizer. The predominant float types were the three small float hydro-plane types with the two large pontoon-type running second.

Model designs for the most were conventional, predominently Class C. The winning job was flown by Ted Gillett, the Aero Midget man, and logged a total time of 392.7 seconds, thereby establishing a new national record. His model was an Aero Midget powered Zipper (see photo).

Indoor events also featured the first day, and despite the low ceiling of the Forum, excellent flights were logged. The indoor hand-launched glider event attracted numerous entries with some very radical designs varying from flying wings to canards. The indoor R. O. W. event attracted some entries, but adhesion was a real enemy that day. Merrick Andrews was the only contestant to have his model break from the surface of the water and logged a flight of an amazing six minutes! Highest time officially listed in the indoor events was made by C. D. Janke of Sheboygan, Wisconsin, with 15 minutes, 31.6 seconds. The indoor Auto-Heli-Orni event, when interpreted means a combined event for Autogiros, Helicopters and Ornithopters, attracted many entrants and proved an amusing event. To one who has never witnessed these models, he would be tempted to drag out a broom and start swinging at them, for as they flew, either blades were rotating, wings flapping or the models were quivering and bouncing around the air resembling overgrown insects! The Ornithopter event was particularly novel because of the flapping wings. Ed Lidgard of Chicago, is shown launching his model for a flight of one minute, 17.8 seconds to win sixth spot for himself.

Radio Control, held at the Boeing Ramp, attracted only a handful of entrants, with Jim Walker and W. Siegfried as the leading contestants. Walker and Siegfried have been anxious competitors for several years now, with Walker always managing to earn those few extra points. Jim Walker—the old "U-Control" man himself—flew an original designed model bearing a strong resemblance to a Curtiss Robin, powered with an Ohlsson "60". The model was of box construction and employed a tri-cycle landing gear. The control system was Walker's own, extremely simple in both construction and operation. Walker earned 51.84 points to win this event and put

on a very good show. Because some interested (?) spectator came too close, the stabilizer of the model was damaged, causing erratic control with this control surface. Despite this, the model was flown with great precision. Following an unsuccessful takeoff, the model was hand launched and climbed into the wind about 100 ft., then levelled off. The engine was throttled back to cruising speed and the model was circled around the area. After doing several "figure eights" and some stalls, Walker maneuvered the model down wind and made an approach for a spot landing. The motor was shut off, the model heading for the spot landing post. Walker worked with great ease and set the model down within ten feet of the post. Jim claimed that he could have hit the post if his sun glasses hadn't clouded up—and we believe it! We clocked the flight at 7 minutes and 45 seconds from launching until landing.

Siegfried had his original designed Forster 29 powered model on hand, and because of radio trouble and high winds, was able to earn only 43.17 points, winning second place.

The Best Finish event was really exceptional, with V. W. Russell of Fort Worth, Texas, winning with his Vampire control line model. His job was quite radical and bore some resemblance to the XFG-1 Glider, with swept-forward wings. This model was also flown on wires, proving extremely stable in flight.

Rubber models were back in their glory at the Nationals this year, with many old-timers out there winding 'em up and letting them go. Flight times were very high, with ideal weather and thermals galore. Fifteen and twenty minute flights were very common. The longest flight was made by Mark Haller of Chicago with 26 minutes, 50.3 seconds. Designs were conventional except for a couple of canard pusher types. Old-timers and names in the hobby turned up among the winners, notably George Reich, Hank A. Cole, Milt Huguelet, George Wright, Chester Lanzo and Dick Korda.

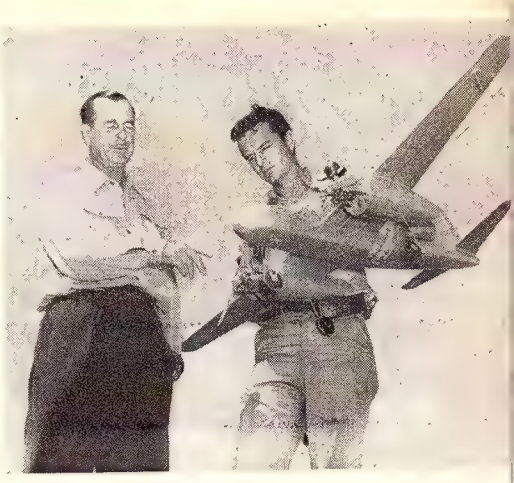
Hank Struck—the old master, won first place by earning a total of 77.6 points with a long flight. Hank flew a new L-5 Army model. Chet Lanzo ran a close second with his eight year old Puss Moth model and earning 63 points.

For the very first time, Towline Gliders were included as an event in the Nationals. Designs varied from converted stick and cabin models to the graceful soaring glider types. Because of the extremely high winds during most of the day, flight times were at a minimum, with Dick Korda being timed the highest for 2 minutes, 15.5 seconds. Someone claims he used a stretchable tow line, hummm! Frank Zaic, the glider man himself, came in the money with a 41.4 seconds flight, despite high winds. These models were comparatively new to the Nationals and proved quite popular. Many unofficial flights of several minutes were clocked, but as usual, the official flights were quite low. G. Peterson was timed the longest with a 3 minute, 44.8 second flight.

As usual, the Free Flight Gas Event proved to attract the greatest number of contestants and interest. Class A Free Flight was held on Saturday, Aug. 31st, and the weather was extremely windy, in fact so windy that models flew from sight in less than two minutes! Longest flight in this event was made by Bill Burks with better than six minutes. He was one of the more fortunate lads that hooked a small riser between puffs of wind. His total time was 10 minutes, 21.5 seconds. Bill flew a Bantam Powered Zomby design. C. O. Wright ran a close second with 8:26.7 with a Bantam powered Interceptor. Kit designs proved to predominate in this event and other free flight events, although several original designs hit the money.

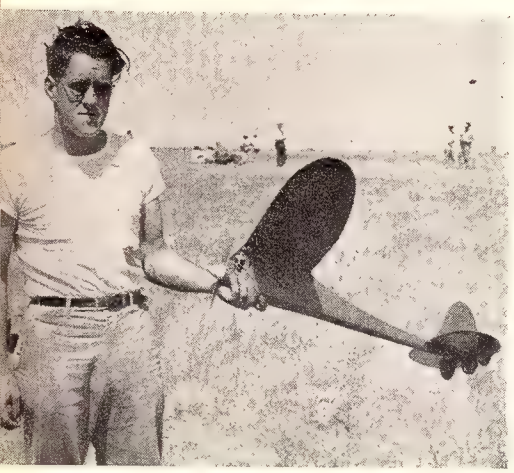
Sunday's weather was ideal when Class B Free Flight came off. The wind varied from 3 to 10 mph most of the day, enabling models to log some really high times. The open event, as usual, attracted the keenest competition with flights of over ten minutes being common. Herman Weber won Open Class B event with 28 minutes 57.7 seconds. James Nils ran close second with a total of 27:39.4 minutes. It was interesting to note that the flight times increased with the age groupings, which more or less bears out the fact that experience is a great factor in free flight flying.

Monday, Sept. 2nd, the oddest weather was really experienced! From dead calm in the morning, almost all types of weather except snowstorms took place. In the forenoon, just prior to the sweetest thunderstorm, flights were being rattled off to the time of 10 and 15 minutes continuously. Two flights were clocked at better than 30 minutes. Frank A. Davis won Class C Open with a total of 37 minutes, 57.2 seconds, with G. V. Mc-

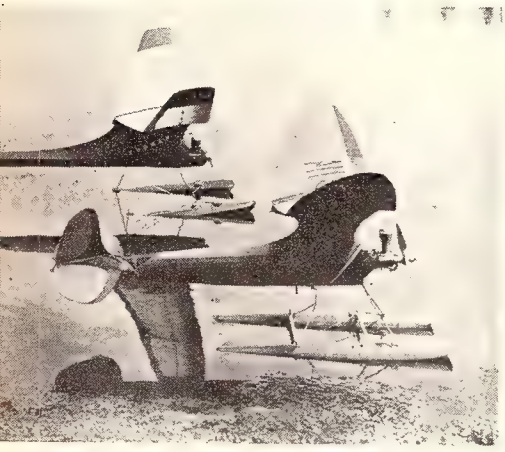


Kork Kelley, noted inventor, advises his son Robert to change the bad spark plug on the balky engine. Two Super Cyclone engines were used to power this 5-ft. span A-26 invader control-line model.

Meet some of the champions from the Nationals. #1—Leon Shulman presents Model Craftsman Magazine Award to National Novice Champion Frank Davis of San Diego, Calif., for having highest single flight time of 35 minutes. #2—Don Newberger of Long Beach, Calif., is congratulated by Fred Schrott of McCoy Engines for taking first in Class IV & V Control Line Event. #3—New National Champion, Milton Huguelet of Chicago, holds one of his trophies. He earned 210 points to win the Championship. #4—C. H. Wallick of Long Beach, Calif., kneels behind trophies he won in Class VI Open Control Line Event. Wallick was clocked at 116.12 MPH. #5—Bill Burks of Birmingham, Ala., took first spot in Class A Open Gas Event to win the Modelcraft Award. His winning model was a Bantam-powered Zomby.



Dick Korda shows his Class A original design "Powerhouse" gas model. Dick recently set a new National record with a Class B version of this model, plans of which will soon appear in Model Craftsman.



A "Zipper" and a "Zoomer" float off shore waiting their turn to fly. The Zipper was powered with an experimental Diesel Engine.

Clure flying close on his tail with 37 minutes, 39.2 seconds. Considerable controversy took place over a technicality between these two contenders with F. Davis given the favorable decision. Davis flew a Comet Sailplane and McClure an Eagle Vagabond. This event showed considerably more originality than Class A and B since original designs were prominent among the kit models.

Generally speaking, the free flight events were more successful than in previous years, due to the hand launched ruling. Very few models cracked up due to this launching method. Many more official flights and fewer delayed flights were recorded also due to this.

Control Line events, although new to the Nationals, were extremely successful. This included speed in all classes and stunt flying events were broken down to Class I and II (from 0 to .20 disp.) Class III (.20 to .30) Class IV and V (.30 to .50) and Class VI (.50 on up). A new national record was established by C. H. Wallick with 116.12 MPH, but at the time of this writing has already been beaten.

Class I and II were clocked at the highest time of 77.58 MPH which is believed to be a new national record in the Senior category for Jack Norris of Lakewood, Ohio. Dick Korda was clocked at 69.23 MPH to win first in the open class. Class III was up to par with 88.67 MPH being tops. Class IV and V was won by Don Newberger with 98.90 MPH in open class. This is also believed a new national record.

Class VI—the big babies, experienced considerable competition with the majority of flights being in the vicinity of 100 MPH. Don Newberger, who was a hot contender, ran into trouble and was clocked best at 101.12 MPH. His buddy C. H. Wallick of Long Beach, California, won first in the open class with 116.12 MPH.

Control Line Stunt really went over big with all contestants. A new personality has entered the hobby sport of model building that is destined to advance the game more than any other one thing in the past few years. Davis Slagle is the name and he hails from Burbank, Calif. Young Davis is only 13 years old. He flies a control line stunt model with the ease of a veteran. As a matter of fact, he flew his model while blindfolded and was still able to do a job of it. Just to prove this point — he accumulated 102 points, compared to 86 by his nearest competitor, Dave R. Webb, who also was a junior flier. These Junior Fliers each earned more points than any Senior or Open Flier. Russell Snyder earned 53½ points to win first in the Senior Class Stunt Event and R. H. Root earned 56 to win first in the Open Class.

Young Slagle made his model do everything but talk! He flew a Super Cyclone powered original design which resembled an Ercoupe. The Slagle lad took off, flew the model upright or inverted, looped inside and outside, hedge-hopped, and landed with ease. By far, he earned more applause than any other contestant at the entire Nationals. For this outstanding flying, he earned the National Junior Champion title and trophy.

The Victory Buffet Dinner and awarding of trophies took place in the Forum on Monday evening with all contestants in attendance. After several talks and reading of telegrams from such notables as President Truman, General Carl Spaatz, Donald Douglas, Jack Nothrup, Martin, and Captain Eddie Rickenbacker, Chairman of the Fellowship Committee Irwin Polk took over and awarded Honorary Fellowship in AMA to Carl Goldberg for his contribution in Model Design, Charles H. Grant for his literary efforts in model aeronautics, Jim Walker for his contribution of perfection in U-Control, and Mr. Irving Levy for his promotion of model aviation in the East for the past 15 years. Short talks were given the contestants by Carl Goldberg, Charles Grant, Frank Zaic, Al Lewis and Irwin Polk. Awarding of the beautiful trophies was finally made and required several hours due to the tremendous number of awards, consisting of the traditional perpetual trophies. Several newer awards were made this year of which Jim Walker's specially built trophy went to Control Line Stunt and the Model Craftsman award which went to Frank Davis for the highest individual single flight time.

In summing up the Nationals this year, we find that model aviation, although suffering great loss of active followers during the war years, now has a larger following than ever before. If interest keeps growing, it may require possibly three to four different nationals to better accommodate all its entrants or else a system devised for a series of elimination meets to permit only a predetermined number of entrants from each state in the country to compete at the finals. The Institute of Air Age Activity, which plans to sponsor the next five national contests, is preparing such a program for presentation to the Academy of Model Aeronautics.

Following is a complete listing of all winners and the events of the 15th Annual National Model Airplane Championships Meet: *Photos by Bev. Smith*

CONTROL LINE STUNT—
HIGH POINT WINNER

Davis Slagle, Burbank, Calif..... 102

ALL GAS EVENTS—
HIGH POINT WINNER

Frank Davis, San Diego, Calif.

HIGHEST INDIVIDUAL FLIGHT TIME
(Model Craftsman Trophy)

Frank Davis, San Diego, Calif.
(Class C Open Gas)

FOUR TOP TEAMS

	pts.
1. Cleveland Balsa Butchers	425
2. Portland Gas Hoppers	360
3. Chicago Aeronuts	250
4. Cleveland Control-Liners	235

LOWEST OFFICIAL SPEED IN CONTROL LINE

	mph.
Dave R. Webb, Dallas, Tex.	36

NATIONAL CHAMPION

	pts.
M. L. Huguelet, Chicago	210

NATIONAL SR. CHAMPION

Jack Norris, Lakewood, O. 100

NATIONAL JR. CHAMPION

David Slagle, Burbank, Cal. 100

NATIONAL NOVICE CHAMPION

Frank Davis, San Diego, Cal. 100

15th Annual National Model Airplane Meet—Sponsored by the Wichita Y. M. C. A. and Wichita Kiwanis Club.

INDOOR H.L. RUBBER STICK
HIGH TIME (JR.-SR.)

Robt. C. Wykes, Medford, Mass. 11:39.0

INDOOR H.L. RUBBER STICK—JR.

1. Robert C. Wykes, Medford, Mass.	11:39.0
2. Raymond Wykes, Medford, ...	11:39.0
3. B. J. Schwennesen, Chicago, Ill...	5:12.0

INDOOR H.L. RUBBER STICK—SR.

1. Geo. Haroutanian, Chelsea, Mass..	11:24.7
2. John Frankovich, Revere, Mass..	9:34.9
3. R. J. Fox, Detroit, Mich.	8:30.1
4. R. S. Djorup, N. Y., N. Y.	5:32.5
5. W. R. Ehrlich, Chicago	3:28.2
6. J. B. Mathews, Syracuse, N. Y. ..	2:56.5

INDOOR H.L. RUBBER STICK—OPEN

1. C. D. Janke, Sheboygan, Wisc. ..	15:31.6
2. W. E. Atwood, Pasadena, Calif...	14:36.4
3. M. S. Andrews, Forest Hills, N.Y.	14:13.2
4. F. L. Cummings, L. A., Cal. ..	13:57.0
5. Carl Goldberg, Chicago	13:44.4
6. M. L. Huguelet, Chicago	13:02.9

RUBBER CABIN—INDOOR—OVERALL
HIGH TIME

M. L. Huguelet, Chicago 14:12.0

INDOOR RUBBER CABIN—JR.

1. Robert Wykes, Medford, Mass. ..	6:29.8
2. Raymond Wykes, Medford	1:22.6

INDOOR RUBBER CABIN—SR.

1. D. E. Weiler, Chicago	5:27.8
2. Geo. Haroutunian, Chelsea, Mass..	0:31.0

INDOOR RUBBER CABIN—OPEN

1. M. L. Huguelet, Chicago 14:12.0

2. M. S. Andrews, Forest Hills, N.Y. 12:28.4
3. F. W. Stanwick, Lakehurst, N. J. 12:26.6
4. W. E. Atwood, Pasadena, Calif... 9:09.2
5. F. L. Cummings, Los Angeles, Cal. 8:54.6
6. R. G. Schmitt, Chicago 8:24.1

R.O.W. INDOOR

1. Merrick Andrews, N. Y., N. Y... 6:00.0

H.L. GLIDER—OVERALL HIGH TIME —INDOOR

M. L. Huguelet, Chicago 0:39.4

H.L. GLIDER—INDOOR—JR.

1. Robert Wykes, Medford, Mass. .. 0:30.3
2. R. E. Piper, Chicago 0:26.5
3. Raymond Wykes, Medford, Mass. 0:25.6
4. B. R. Brewer, Rockford, Ill. 0:23.4
5. D. N. Wade, L. A., Cal. 0:20.2
6. K. R. Wilson, Omaha, Neb. 0:13.2

INDOOR H.L. GLIDER—SR.

1. Wm. Morez, Chicago 0:34.0
2. C. J. Banks, Kenosha, Wisc. 0:31.2
3. Geo. Haroutunian, Chelsea, Mass. 0:30.8
4. Frank Garcher, Chicago 0:30.5
5. W. R. Erlich, Chicago 0:30.0
6. G. T. Flesher, Rockford, Ill. ... 0:29.2

INDOOR H.L. GLIDER—OPEN

1. M.L. Huguelet, Chicago 0:39.4
2. C. E. Hollinger, Seattle 0:39.2
3. H. A. Cole, Seattle, Wash. 0:38.3
4. M. G. Demos, Oakland, Cal. 0:35.6
5. Carl Goldberg, Chicago 0:34.0
6. W. M. Simmers, Chicago 0:33.9

AUTO-HELI-ORNI INDOOR—JR.

1. Robt. Wykes, Medford, Mass. 2:04.0

INDOOR HELI-AUTO-ORNI—SR.

1. C. M. Goldstein, Chicago 2:32.2
2. Geo. Haroutunian, Chicago 1:32.0
3. R. E. Wallace, Wichita 0:57.2
4. Geo. Haroutunian, Chelsea, Mass.. 0:36.8
5. W. R. Ehrlich, Chicago 0:05.0
6. Geo. Haroutunian, Chelsea 0:04.0

INDOOR AUTO-HELI-ORNI—OPEN

1. Carl Goldberg, Chicago 4:06.2
2. Carl Goldberg, Chicago 3:18.2
3. H. P. Schoenky, Kirkwood, Mo. .. 2:56.1
4. J. W. Bock, Chicago 2:07.5
5. J. P. Matulis, Chicago 1:32.6
6. E. J. Lidgard, Chicago 1:17.8

RADIO CONTROL

	Pts.
1. Jim Walker	51.84
2. W. G. Siegfried, Wichita	43.17

BEST FINISH

1. V. W. Russell, Ft. Worth, Tex. (Vampire)
2. Jack Armstrong, Wichita, Kans. (Rearwin)
3. Roger Barton, College Station, Tex.
4. Cedric Galloway, Burbank, Cal.
5. Les McBrayer, Alhambra, Cal.
6. H. L. Leaf, Okla. City, Okla.

NOVICE

OUTDOOR RUBBER STICK—OVERALL HIGH TIME

Mark Heller, Chicago 26:50.3

OUTDOOR RUBBER STICK—JR.

1. Thad Taft, L. A., Calif. 19:25.0
2. R. P. Wykes, Medford, Mass. .. 17:38.6
3. Robert Wykes, Medford 13:11.3
4. K. Homan, Omaha, Nebr. 4:52.5
5. R. E. Piper, Chicago 4:13.1
6. B. J. Schwennesen, Chicago 1:06.2

OUTDOOR RUBBER STICK—SR.

1. G. T. Flesher, Rockford, Ill. 12:56.03
2. Herbert Kothe, Omaha, Neb. ... 12:27.07
3. A. H. Fritz, Chicago 12:01.6
4. R. L. Denton, Kenosha, Wis. 10:34.1
5. W. E. Fletcher, Elmhurst, N. Y... 7:45.3
6. Geo. Haroutunian, Chelsea, Mass.. 7:14.1
7. R. J. Fox, Akron, O. 6:34.1
8. Frank Garcher, Chicago 6:02.2
9. Wm. Morez, Chicago 4:51.6
10. J. H. Brown, Wichita, Kans. 3:41.9

OUTDOOR RUBBER STICK—OPEN

1. Mark Heller, Chicago 26:50.3
2. Geo. Reich, Cleveland, O. 25:55.8
3. J. A. Pierce, St. Joseph, Mo. 23:49.2
4. H. A. Cole, Seattle, Wash. 15:09.8
5. J. A. Broderick, Chicago 13:53.2
6. R. F. Good, Chicago 13:06.2
7. M. L. Huguelet, Chicago 12:44.3
8. P. L. Vacco, Chicago 11:16.1
9. J. W. Bock, Chicago 10:51.1
10. Robt. J. Mueller, Chicago 11:05.2

OUTDOOR RUBBER CABIN—OVERALL HIGH TIME

Geo. Wright, Cleveland, O. 7:26.5

OUTDOOR RUBBER CABIN—JR.

1. J. K. Clemens, Naperville, Ill. .. 3:00.2
2. Robert Wykes, Medford, Mass. .. 2:54.4
3. Thad Taft, L. A., Calif. 1:33.0

OUTDOOR RUBBER CABIN—SR.

1. R. L. Denton, Kenosha, Wisc..... 6:28.8
2. D. D. Miner, Wichita 5:02.8
3. Frank Garcher, Chicago 4:36.1
4. Robt. Blancho, Pittsburg, Kans. .. 4:28.2
5. C. B. Dorsett, San Fran., Calif. .. 4:25.0
6. R. J. Fox, Detroit 4:21.3
7. G. T. Flesher, Rochford, Ill. 4:01.3
8. H. C. Thompson, Chicago 3:57.9
9. D. A. North, Venice, Calif. 3:51.6

OUTDOOR RUBBER CABIN—OPEN

1. Geo. Wright, Cleveland, O. 7:26.5
2. H. A. Cole, Seattle 7:04.4
3. Robt. Annas, Detroit 6:44.5
4. R. J. Schmitt, Chicago 6:16.8
5. G. W. Hammer, Minneapolis, Minn. 6:11.8
6. J. W. Bock, Chicago 5:36.1
7. R. J. Dunham, Tulsa, Okla. 5:27.9
8. M. L. Huguelet, Chicago 5:17.4

FLYING SCALE—OUTDOOR

	Pts.
1. Henry Struck, Old Lyme, Conn...	77.6
2. C. D. Lanzo, Cleveland, O.	63
3. R. G. Schmitt, Chicago	60
4. B. J. Schwenneson, Chicago	56.6
5. G. Haroutunian, Chelsea, Mass.	53
6. Robt. Annas, Detroit, Mich.	50

AUTO-HELI-ORNI OUTDOOR—SR. (NO JR.)

1. Geo. Haroutunian, Chelsea, Mass. 1:56.3
2. Wm. Ehrlich, Chicago 0:02.1
3. W. D. Schoenky, Kirkwood, Mo.. 0:02.0

AUTO-HELI-ORNI OUTDOOR—OPEN

1. H. P. Schoenky, Kirkwood, Mo... 3:03.1
2. Carl Goldberg, Chicago, Ill. 2:04.6
3. E. J. Lidgard, Chicago, Ill 0:52.0
4. J. P. Matulis, Chicago, Ill..... 0:16.0
5. John Bock, Chicago, Ill. 0:07.5

OUTDOOR TOWLINE GLIDER—JR.

1. R. D. Johnson, Wichita, Kans... 1:15.5
2. J. S. McClelland, Independence, Kans. 0:22.4
3. Hobert Braden, Independence, Kans. 0:19.28
4. Bobbie Bain, Wichita, Kans. 0:17.0
5. J. E. Sheldon, Great Bend, Kans. 0:15.8

OUTDOOR TOWLINE GLIDER—SR.

1. J. H. Brown, Wichita, Kans. 0:56.9
2. Carl Unruh, Wichita, Kans..... 0:48.7
3. R. E. Wallace, Wichita, Kans. .. 0:30.4
4. Herbert Kothe, Omaha, Nebr. ... 0:28.1
5. W. J. Tsumpes, Marion, O. 0:03.8

OUTDOOR TOWLINE GLIDER—OPEN

1. Dick Korda, Cleveland, O. 2:15.5
2. M. D. Andrade, Oakland, Calif... 1:45.5
3. G. P. Perryman, La Grange, Ga.. 0:56.0
4. L. G. Vargo, Okla. City, Okla.... 0:51.4
5. R. F. O'Brien, Peoria, Ill. 0:44.2
6. S. G. Bennett, Oakland, Calif. ... 0:42.0
7. Frank Zaic, New York, N. Y.... 0:41.4

OUTDOOR H. L. GLIDER—JR.

1. B. R. Brewer, Rockford, Ill. 0:59.1
2. Geo. Patrick, Houston, Tex. 0:32.8
3. Thad Taft, Los Angeles, Calif. ... 0:30.6
4. D. N. Wade, Los Angeles, Calif... 0:30.0
5. R. E. Piper, Chicago 0:22.0
6. R. H. Braden, Independence, Kans. 0:17.9
7. Robert C. Wykes, Medford, Mass. 0:08.5
8. B. F. Burright, Wichita, Kans.... 0:04.4
9. C. J. Woodin, Wichita, Kans. 0:04.2

OUTDOOR H. L. GLIDER—SR.

1. O. Irish, Tulsa, Okla. 2:42.0
2. D. A. North, Venice, Calif. 1:51.5
3. R. S. Anderson, Tulsa, Okla. 1:13.7
4. Geo. Haroutunian, Chelsea, Mass. 0:59.4
5. G. T. Flesher, Rockford, Ill. 0:50.0
6. R. C. Warmann, Kenosha, Wis... 0:49.8
7. R. P. Hanford, Oceana Park, Calif. 0:47.8
8. F. S. Astemborski, Akron, O. 0:45.6
9. C. H. Swartz, Houston, Tex. 0:45.0

OUTDOOR OPEN H. L. GLIDER

1. A. G. Peterson, Oakland, Calif. .. 3:44.8
2. C. J. Mather, Naperville, Calif. .. 1:20.3
3. M. G. Demos, Oakland, Calif. ... 1:14.0
4. S. G. Bennett, Oakland, Calif. .. 1:11.2
5. M. L. Huguelet, Chicago 1:09.2
6. R. E. Lawrence, Rockford, Ill. .. 1:06.9
7. W. C. Lopez, Los Angeles, Calif. 1:03.4
8. G. B. Perryman, La Grange, Ga.. 0:54.0
9. D. W. Gilbert, Oakland, Calif. .. 0:52.2
10. Bob Greider, Ardmore, Okla. 0:50.5

JUNIOR A GAS

1. W. D. Leaf, Oklahoma City 5:05.9
2. J. W. Cordell, Bartlesville, Okla.. 3:39.1
3. D. N. Wade, Los Angeles, Calif... 3:16.0
4. Mike Stephens, Springfield, Mo... 2:57.1
5. B. L. Kempton, St. Joe, Mo. 2:00.2

SENIOR A GAS

1. Herbert Kothe, Omaha 7:44.2
2. Al Milana, Omaha 7:36.0
3. W. K. Mather, Cleveland, O. 6:48.5
4. T. M. Anderson, Chicago 6:41.9
5. J. R. Norris, Lakewood, O. 6:58.5
6. Jerry Bahula, Omaha 5:56.8
7. C. B. Blumer, Minneapolis 5:49.5
8. Jack Fluehr, Omaha 5:08.3
9. P. D. Lindholm, Naperville, Ill... 5:05.4
10. James W. Nicas, Omaha 4:53.8

OPEN A GAS

1. Bill Burks, Birmingham 10:21.5
2. C. O. Wright, Topeka 8:26.7
3. K. E. Burr, Portland, Ore. 7:58.0
4. G. E. Gordon, Toledo, O. 7:46.9
5. A. W. Leftwich, Richmond, Va... 7:22.5
6. C. D. McCullough, Ottumwa, Ia. 7:21.8
7. Dick Korda, Cleveland, O..... 7:18.1
8. R. D. Rother, Kirkwood, Mo. 7:16.7
9. Winnie Davis, Kansas City, Mo... 7:16.4
10. J. H. Schneider, Scotia, N. Y.... 6:52.7

JUNIOR B GAS

1. D. N. Wade, Los Angeles, Calif.. 20:25.4
2. B. Weber, Houston, Tex. 3:45.1
3. B. L. Kempton, St. Joseph, Mo... 3:23.7
4. B. J. Kilger, Waukegan, Ill. 3:14.3
5. M. G. Pollock, St. Joseph, Mo. .. 2:35.7
6. Bob Cook, Kansas City, Mo. 2:03.8
7. L. A. Johnston, Holdenville, Okla. 1:49.9
8. R. E. Piper, Chicago 1:37.5
9. P. C. Cary, Denver 1:13.9
10. Mike Stephens, Springfield, Mo... 1:07.8
11. B. R. Brewer, Rockford, Ill. 1:02.7

SENIOR B GAS

1. M. K. Mather, Cleveland, O. 23:19.0
2. R. R. D'Onofrio, Watertown, Mass. 18:48.2
3. Andre Stavast, Highlands, N. J... 15:10.6
4. R. P. Hanford, Ocean Park, Calif. 10:53.3
5. F. D. Whiting III, Okla. City, Okla. 9:39.2
6. T. M. Anderson, Chicago 9:11.6
7. S. A. Jepson, Sioux Falls, S. D... 9:05.7
8. M. S. Blemley, Detroit 8:23.3
9. R. L. Denton, Kenosha, Wis. ... 8:07.4
10. W. E. Tharp, Ocean Park, Calif.. 7:48.0

OPEN B GAS

1. Herman Weber, Houston 28:57.7
2. James Niles, Ames, Ia. 27:39.4
3. Robt. Sweger, St. Paul, Minn. ... 23:18.0
4. V. W. Oldershaw, Bakersfield, Calif. 21:57.9
5. Bill Lane, Los Angeles, Calif. ... 20:43.4
6. Jim Root, Independence, Mo. 19:40.0
7. Robert Wood, Milwaukee, Wis. .. 19:24.0
8. Don Justice, Fontana, Cal..... 17:06.6
9. William Wills, Richmond, Va. .. 15:28.4
10. Dennis Davis, San Diego 13:39.1

JUNIOR C GAS

1. D. N. Wade, Los Angeles, Calif.. 14:35.0
2. P. Ono, Denver 4:39.5
3. R. Tooley, St. Louis, Mo. 4:32.1
4. Jimmy Donal, Denver 4:25.9

Bob Wyker of Boston, Mass., is caught launching his indoor helicopter model.

JUNIOR C GAS (cont.)

5. M. G. Pollack, St. Joseph, Mo. .. 2:50.9
6. V. Weber, Houston 1:36.5
7. Richard Erdman, Denver, Colo. .. 1:10.3
8. John Eshen, Denver 0:34.0
9. R. E. Piper, Chicago 0:32.1
10. G. A. Richey, Jr., Tulsa 0:03.1

SENIOR C GAS

1. D. L. Benson, Washington, D. C. 12:44.6
2. C. B. Blumer, Minneapolis 9:49.1
3. A. S. Bihler, Omaha 8:30.3
4. Wm. Morez, Chicago 7:24.1
5. L. P. Perry, Okla. City 7:07.8
6. W. E. Fletcher, Elmhurst, N. Y.. 6:10.7
7. J. R. Norris, Lakewood, O. 6:08.7
8. C. B. Dorsett, San Francisco ... 6:08.7
9. A. A. Weber, Houston 5:13.8
10. D. L. Gibson, St. Joseph, Mo.... 4:23.2
11. L. H. Conover, Iowa City, Ia. ... 4:21.2

OPEN C GAS

1. F. A. Davis, San Diego, Calif.... 37:57.9
2. G. V. McClure, Okla. City 37:39.2
3. Don Justice, Fontana, Calif. 18:23.9
4. J. A. Pierce, St. Joseph, Mo. 16:35.0
5. C. D. McCullough, Ottumwa, Ia. 13:18.7
6. W. P. Droupa, Houston, Tex. ... 11:08.4
7. H. S. Myers, Wichita Falls, Tex. 10:55.0
8. B. E. Baird, Tyler, Tex. 10:20.4
9. R. W. Wright, Topeka, Kans..... 9:41.3
10. J. R. Root, Independence, Mo. ... 8:11.9
11. R. A. Cuson, Detroit, Mich. 7:00.4

R. O. W. GAS

	sec.
1. Ted Gillett, Hollywood, Calif. ...	392.7
2. Lew Mahiau, Long Beach, Calif...	237.6
3. Wm. E. Lopez, Los Angeles, Calif.	168.4
4. Chas. E. Hollinger, Seattle.....	159.2
5. John Schneider, Scotia, N. Y.....	104.5
6. Leon Shulman, Ramsey, N. J. ...	88.2

CONTROL LINE—TOP SPEED

	mph.
C. H. Wallick, Long Beach, Calif....	116.12

CONTROL LINE I & II—JR.

	mph.
1. E. J. Schwartz, Little Rock, Ark.	45.23
2. Dave Webb, Dallas, Tex.	36.00

CONTROL LINE I & II—SR.

1. Jack Norris, Lakewood, O.	77.58
2. W. K. Mather, Cleveland, O.	57.69

CONTROL LINE I & II—OPEN

1. Dick Korda, Cleveland, O.	69.23
2. Donald McClusky, Irondale, Ala. .	62.93
3. R. W. Robertson, Birmingham, Ala.	62.93

CONTROL LINE III—JR.

1. Leon Shelton, Salina, Kans.....	83.72
2. Paul White, Akron, O.	83.13
3. Skippy Pickeny, Elmhurst, Ill. ..	54.21
4. Dave R. Webb, Dallas, Tex.	52.94

CONTROL LINE III—SR.

1. Thomas Burns, Cleveland, O.	88.67
2. J. Ridella, Cleveland, O.	77.58
3. J. Giunta, Cleveland, O.	73.77
4. Jack Norris, Lakewood, O.	73.46
5. R. H. Edwards, Akron, O.	70.70
6. Kenneth Flagler, Des Plaines, Ill.	65.21

CONTROL LINE III—OPEN

1. Geo. Sugichi, Cleveland, O.	84.90
2. R. W. Shuelke, Wichita, Kans...	78.94
3. Les McBrayer, Alhambra, Calif...	77.92
4. M. J. Kania, Philadelphia	75.78
5. C. W. Mumaw, Kansas City, Mo.	73.46
6. Dean E. Zongker, Wichita, Kans.	66.66

CONTROL LINE IV & V—JR.

1. Dave R. Webb, Dallas, Tex.	71.14

CONTROL LINE IV & V—SR.

1. G. R. Pate, Ft. Worth, Tex.....	75.31
2. Kenneth Flagler, Des Plaines, Ill.	58.44

CONTROL LINE IV & V—OPEN

1. D. W. Newberger, Long Beach..	98.90
2. C. W. Mumaw, Kansas City, Mo.	97.29
3. J. R. Fowler, Kansas City, Mo...	92.30
4. K. H. Storey, Pasadena, Calif. ...	85.30
5. H. L. Riley, Shreveport, La.	74.68
6. M. K. Specter, Cincinnati, O. ...	70.86
7. J. P. Starkey, Kansas City, Mo...	60.60

CONTROL LINE VI—JR.

1. D. A. Hicks, Webster Groves, Mo.	96.77
2. Glen Vandiver, Shreveport, La. ..	92.30
3. Paul White, Akron, O.	91.83
4. Dave R. Webb, Dallas, Tex.	51.87

CONTROL LINE VI—SR.

1. C. B. Blumer, Minneapolis, Minn.	103.15
2. A. L. Strickland, Birmingham, Ala.	100.55
3. J. W. Gorham, Akron, Ohio	100.00
4. D. Currey, Dallas, Tex.	99.44
5. R. J. Haggenmeier, Minneapolis, Minn.	98.90
6. W. R. Hanstrote, Akron, O.	94.24
7. Roy Pate, Ft. Worth, Tex.	94.24
8. R. H. Edwards, Akron, O.	92.30

CONTROL LINE VI—OPEN

1. C. H. Wallick, Long Beach, Calif.	116.12
2. M. A. Tennison, Dallas, Tex.	107.14
3. Stanley Sieminski, Cleveland, O...	105.88
4. R. W. Robertson, Birmingham, Ala.	105.6
5. M. V. Irwin, Long Beach, Calif...	102.27
(2)	100.00
6. R. L. Allen, Santa Anna, Calif...	102.27
(2)	100.00
7. L. C. Marsh, Urbana, Ill.	102.27
(2)	98.90
8. D. Currey, Dallas, Tex.	101.12
(2)	89.55
9. D. W. Newberger, Long Beach, Calif.	101.12
10. Joe Kitchens, Anaheim, Calif. ...	100.55
11. E. T. Tschernosche, Milwaukee, Wisc.	97.29
(2)	97.29
12. Al Yount, St. Louis, Mo.	97.29

CONTROL LINE STUNT—JR.

	pts.
1. Davis Slagle, Burbank, Calif. ...	102
2. Dave R. Webb, Dallas, Tex.	86
3. Glen Vandiver, Shreveport, La. ..	73

CONTROL LINE STUNT—SR.

1. Russell Snyder, Laredo, Tex.	53½
2. M. A. Cummins, Los Angeles, Calif.	40
3. W. E. Pascoe, Gr. Bend, Kans...	22
4. R. K. Arnett, Hoisington, Kans...	20

CONTROL LINE STUNT—OPEN

1. R. H. Roof, Tulsa, Okla.	56
2. John Casburen, Ft. Worth, Tex...	44
3. W. E. Semler, Denver, Colo.....	33
4. R. B. Weber, Gr. Bend, Kans...	18
5. J. C. Yates, Burbank, Calif.	16

SALEM "CLOUDCHASERS"

Here's the results of the contest held by the Salem Cloudchasers of Salem, Oregon, on July 14th. Outstanding contestant of the day went to Charles E. Hollinger. Yozo Miyako of the Portland "Cement Mixers" turned in the longest flight with a beautiful "60" powered original with a time of 13:03. Beauty Event went to Jerry DeBerry of the Salem club with a beautiful trimmed "60" powered Sr. Playboy. Worst Crack-up, novel event, was taken by Earl L. Cayton who scientifically (????) demolished his new Mighty Midget powered Zipper. Other results follow:

Class A: 1st—K. E. Burr with time of 4:25. 2nd—Glenn Ziegler. 3rd—Chuck Riggs. 4th—H. A. Stephenson.

Class B: 1st—Charles Hollinger with a DeLong powered original, time 4:57. 2nd—B. Keylock. 3rd—Nelson Hi. 4th—Helen Crawford.

Class C: 1st—Charles Hollinger with an original powered with a Mighty Midget inverted and fully cowled, time 6:47. 2nd—Elmer Roth. 3rd—Yozo Miyako. 4th—G. Litrim.

PROP SPINNERS' MONTHLY CONTEST

The Prop Spinners of Long Island held their 8th monthly Intra Club Contest at Creedmore, L. I., on August 11. A Record Trials was also held but due to windy conditions, no new records were established. Other results follow:

FREE FLIGHT GAS COMBINED

Skeets Rinehardt..	6:05.6	Total Minutes
Warren Fletcher ...	3:51.2	" "
Malcolm MacLean..	2:35.0	" "

HAND LAUNCHED GLIDERS

Skeets Rinehardt...	:43.6	Total Minutes
Warren Fletcher	:37.0	" "
Robert Hatschek....	:33.2	" "
John Marotta	:28.6	" "
Malcolm MacLean...	:11.0	" "

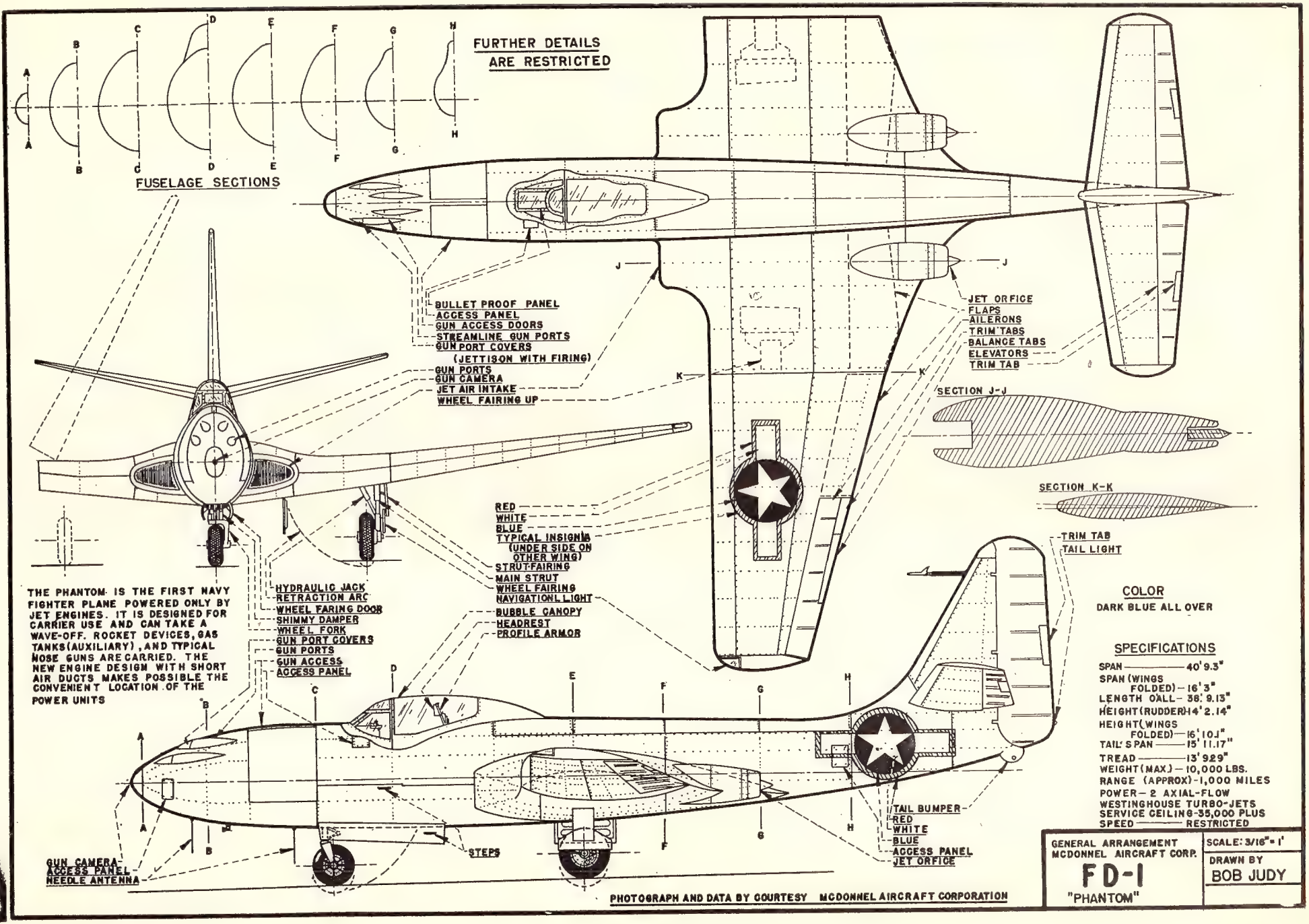
INTRODUCING THE HILL TOPPERS

The "Hill Toppers" Model Airplane Club of Rock Island, Ill., want to introduce themselves. They're a newly organized club (six months), doing nicely and getting better, have a good membership and go in for everything—free flight, control, rubber, etc.

According to Harold Daebelliehn, club president, "we recently pulled what we believe sincerely to be our own original event and should prove a good one for all clubs. We call it the "Air Derby"—it is a race of 25 miles by control line models. Twenty-five miles must be completed in one hour including all stops, landings, takeoffs, etc. This we believe brings out to advantage what the particular flier has on the ball—any size tanks are used, fuels, etc. The flier must take off from ground, no hand launch. It also makes for more activity as a large number of ships may be flown at once and there is a constant flow of gas, smoke, speed, "cursing", etc, for one entire hour. If ships are numerous, we simply repeat for another hour until all contestants are happy —*or unhappy*. Try it, it's real fun!

CORRECTION—In the Engine Survey of our August issue, we listed 1½ lb. thrust for the Bantam engine using an 8/6 prop. This should read 1 3/16 lbs. thrust. The weight of the Bullet engine was also incorrectly given as 9 oz. which should read 6 oz. Sorry!

See next page for 3/16" scale plans



THE PHANTOM IS THE FIRST NAVY FIGHTER PLANE POWERED ONLY BY JET ENGINES. IT IS DESIGNED FOR CARRIER USE AND CAN TAKE A WAVE-OFF. ROCKET DEVICES, GAS TANKS (AUXILIARY), AND TYPICAL NOSE GUNS ARE CARRIED. THE NEW ENGINE DESIGN WITH SHORT AIR DUCTS MAKES POSSIBLE THE CONVENIENT LOCATION OF THE POWER UNITS

COLOR

DARK BLUE ALL OVER

SPECIFICATIONS

SPAN — 40' 9.3"
SPAN (WINGS FOLDED) — 16' 3"
LENGTH O'ALL — 38' 9.13"
HEIGHT (RUDDER) 14' 2.14"
HEIGHT (WINGS FOLDED) — 16' 10.1"
TAIL SPAN — 15' 11.17"
TREAD — 13' 9.29"
WEIGHT (MAX.) — 10,000 LBS.
RANGE (APPROX) — 1,000 MILES
POWER — 2 AXIAL-FLOW WESTINGHOUSE TURBO-JETS
SERVICE CEILING — 35,000 PLUS
SPEED — RESTRICTED

GENERAL ARRANGEMENT
MCDONNEL AIRCRAFT CORP.

FD-1

"PHANTOM"

SCALE: 3/16" = 1'

DRAWN BY BOB JUDY

PHOTOGRAPH AND DATA BY COURTESY MCDONNEL AIRCRAFT CORPORATION

BILL THOMAS COPS RICKENBACKER TROPHY

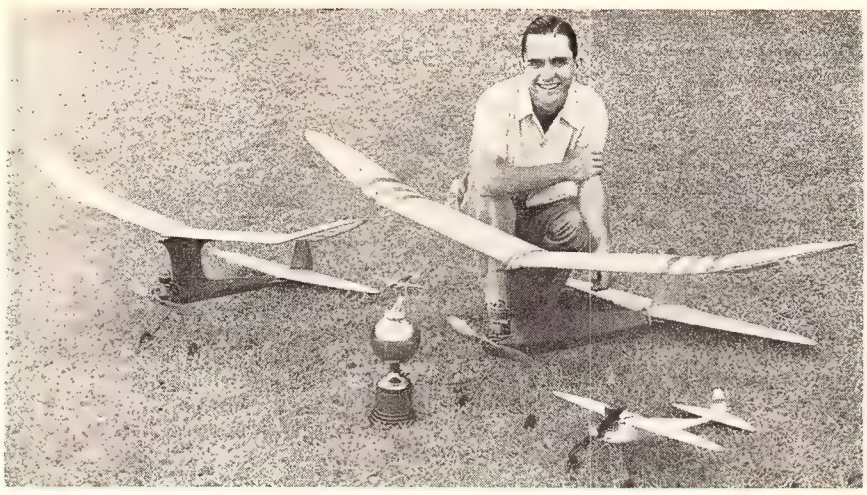
NINETEEN year old Billy Thomas just recently won permanent possession of the coveted Eddie Rickenbacker Trophy in the Sixth Annual Florida State Meet held at Daytona Beach, Florida. The photo shows his three first-place winners A, B & C and U-Control, also the trophy.

Bill has been building and flying models since he was 14 years old, designing and building his own models, both Free Flight and Control Line. He's been runner-up for this trophy twice and winner three times out of six time competition.

In 1944, he won Class C in the "Brainbusters Tournament" in Hampton, Virginia, in competition with modelers from Baltimore, Philadelphia and Washington, while working for the National Advisory Committee for Aeronautics at Langley Field, Va.

At the Dixie States Model Plane Meet in Jacksonville, July 27th and 28th, he won four trophies for firsts and three motors and the Club Plaque for Club having greatest number of points (single handed, as no other Daytona Beach entry

(*Continued on page 66*)



Bill Thomas with his three first place winners in the Sixth Annual Florida State Meet. He now has permanent possession of the famed Rickenbacker Trophy seen in photo.

OHLSSON & RICE TAXI NATIONALS' CONTESTANTS

WHEN Harry T. Rice and Irwin G. Ohlsson set their big silver DC-3 down on the runways at Central Airport, Los Angeles, on Tuesday, Sept. 3rd, they not only brought back the Pacific Coast contestants, but a lot of National Meet hardware as well.

Leaving Wichita at 7 o'clock that morning, they flew non-stop to Los Angeles in 9½ hours, bucking strong headwinds all the way. So it was a very tired crew that climbed down from the cockpit that afternoon.

Outstanding in the Nationals was Pacific Coaster David Wade, 15, of 3012 Edgehill Drive, Los Angeles. He brought back to California sunshine the first place trophies for Class B & C, 3rd honors for Class A, 4th place in the hand-launched glider run-off, and 5th in the indoor hand-launched glider contest. Quite a mess of metal for one modeler to garner at any National Meet.

The West Coast was well represented in other departments as well. Don Newberger carried away first place in Class V control line with a speed of 111.59 MPH. Don is already the world's record holder for Class VI with a speed of 123.88 MPH (this has yet to be approved by the AMA Contest Board).

Other contestants bringing home awards were Les McBrayer, Alhambra, with third spot in Class III; Thaddeus Taft III, first place in Class C rubber powered jobs; Sid Galloway, Burbank, for the best-finish flying scale model.

Los Angeles contestants, winners in the First Western Model Airplane Contest, were flown to Wichita, together with 127 models, for the Nationals, as a bonus award for their good work in the local meet. Inasmuch as the Nationals immediately followed the Los Angeles contest, it was the only way that they could have arrived in time to compete.

Besides Harry T. Rice, Pilot, and Irwin G. Ohlsson, Co-pilot, those making the trip were: S. Bennett, D. Newberger, T. Taft III, F. Cummings, D. Wade, S. Galloway, K. Storey, L. McBrayer, R. Hanford, W. Lopez, D. North, W. Lane, J. Dyer, J. Yates, L. Mahieu, J. Davis, L. Casaly, and T. Gillette.

The DC-3 in which the round trip was made, was recently purchased by Ohlsson & Rice to enable them to maintain close contact with their jobbers across the country. Its initial flight in this capacity was begun last June 25th, and completed July 6th, during which time they visited 21 cities and delivered their engines to various jobbers.

Irwin G. Ohlsson and Harry T. Rice congratulate David Wade, 15 years old, on his accomplishments at the Wichita Nationals. Dave brought home an armful of hardware, taking first in Class B & C, and third in Class A. He also placed fourth in the outdoor hand-launched glider contest, and fifth in the indoor event. Young Wade was one of the winners at the Westerns who were flown to the Nationals as guests of Ohlsson & Rice. Right—Western Model Meet winners on their triumphal return from the Nationals with plenty of prizes and hardware. L. to R., S. Bennett, D. Newberger, T. Taft III, F. Cummings, D. Wade, S. Galloway, K. Storey, L. McBrayer, B. Hanford, B. Lopez, D. North, B. Lane, J. Yates, L. Mahieu, J. Davis, L. Casaly, T. Gillette. Standing in the doorway of their DC-3 are Ohlsson and Rice. They flew the Western winners to the Nationals at Wichita and back in the big ship.

From Maker of Champions... New "O.K." 29

O.K.

Monarch of the Air!

Way up high . . . in the wide, blue yonder . . . where "OK" takes you fast, these engines are the "blue-blooded" line, monarch of all they survey!

"OK" supremacy . . . it goes back to pre-war days! . . . is based on easy starting and consistent running! Fast climb and top speed for championship FREE FLIGHT . . . unfailing responsiveness for CONTROLINE thrills . . .

Flight-in, flight-out your "OK" flying partner will deliver every-time! Delivers the power to bring out the top flight characteristics of your model!

"OK" engines are "toughies" . . . unusually rugged construction assures a l-o-n-g, l-o-n-g, trouble free companionship.

Step in line with outstanding American modellers . . . build around an "OK" power plant in the confidence that you will receive a ceiling run for your money, every time you want to fly!

"OK" in fact, as well as in name . . . you own the finest when you own an "OK" . . . featured by dependable dealers in every locality!

"Snap-to-Start"

O.K. 29

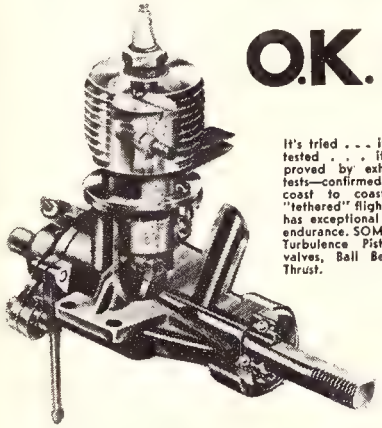
Brings you these design features: 1 pc. steel cylinder. (No gaskets—no heat dam!) 1 pc. hardened and ground crankshaft; Exclusive patented porting (Pat. No. 2,179,683). Exhaust stack integral with crankcase. And others, too numerous to list! See "OK" '29 at your dealer!

$15.50

Incl. Spark Plug Bakelite Tank & Fuel Line

'OK' IGNITION PACK: Fitted with 'OK' Coil. Condenser and Lead, $3.00
SPECIFICATIONS: Bore: .760, Stroke: .660, Displ.: .299.

O.K. 60

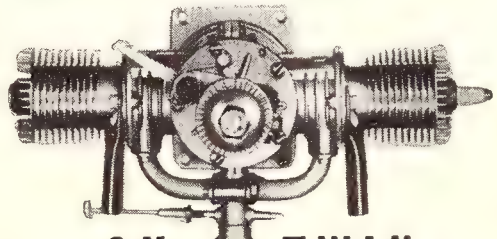


It's tried . . . it's proven . . . it's tested . . . it's an old friend, proved by exhaustive laboratory tests—confirmed by modellers from coast to coast in "free" and "tethered" flight—"OK" Super 60 has exceptional thrust, torque and endurance. SOME features are High Turbulence Piston Head, Rotary valves, Ball Bearing Radial and Thrust.

$18.00

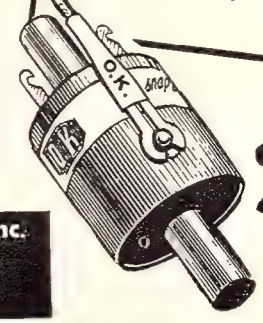
Incl. Spark Plug Bakelite Tank & Fuel Line

'OK' IGNITION PACK: Fitted with 'OK' Coil, Condenser and Lead, $3.00. SPECIFICATIONS: Bore: .900; Stroke: .950; Displ.: .604; Weight (bare): 12 oz.



O.K. TWIN

Improved design! Improved performance! The only opposed "twin cylinder" motor of its kind! Ideal for radio control models and experimentation. Incl. Plugs, Tank and Fuel Line— **$49.00**
"OK" TWIN-IGNITION PACK: Fitted with Twin-Coil, Condenser and Leads, $6.00.



New O.K. Coil

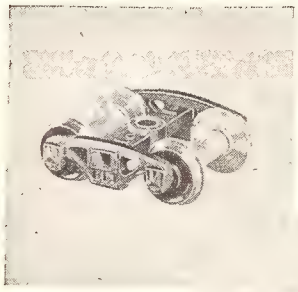
"OK" Ignition Pack ("OK" Coil, Hi-Tension Lead and Condenser) are recommended for top performance! $3 additional. Pre-packed with "OK" Engines, at the factory. We recommend you include these units when purchasing engines.
TWIN IGNITION PACK ("OK" Twin-Coil, High Tension Leads and Condenser), $6 additional.

HERKIMER TOOL & MODEL WORKS, Inc.
HERKIMER, NEW YORK
Export Office: 120 Wall St., New York 5
CABLE ADDRESS (All Cables) "Concordia", New York

Treatise on TRUCKS

Trucks are the most important functional part of any HO Gauge model railroad car. The slightest deviation in wheel gauge or fault in insulation and your cars are on a "shop siding" instead of rolling.

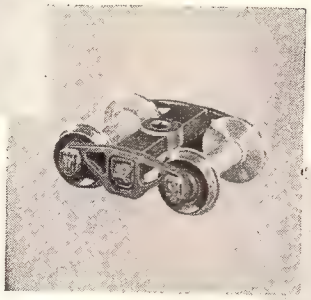
Mantua Trucks are built, step by step, that's why their exclusive construction means—WHEELS are mechanically locked on the axles, *they will not work loose, they will not get out of gauge.* Wheels that are true *always.* INSULATION is positive, *it cannot crack, work loose or deteriorate.*



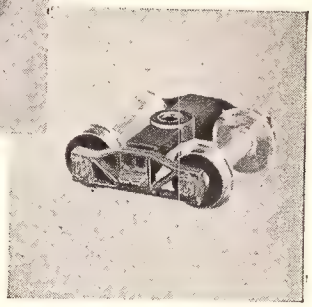
Old-style 4-Wheel Passenger Truck: These trucks were used on most passenger cars up to the turn of the century and still are used for Work Trains, Wreckings Trains, etc. $1.00 per pair

Look at the details of construction and assembly in the drawings below . . . COMPARE!

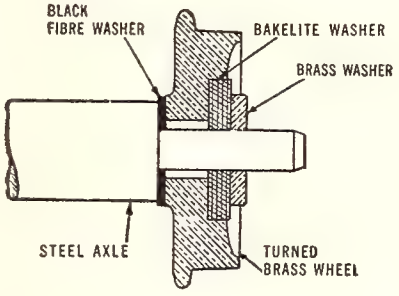
Freight Truck: Bettendorf —for all modern freight cars. $1.00 per pair

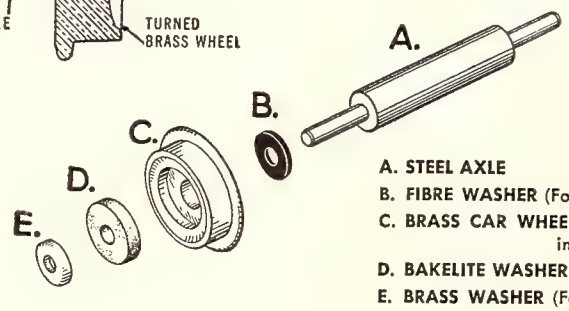


Caboose Truck: Swing motion Bettendorf, excellent for most types of Caboose. $1.25 per pair



Tender Truck: Arch Bar, used on most old-style Tenders. Like all Mantua Trucks it is finely detailed for authenticity. $1.25 per pair





A. STEEL AXLE
B. FIBRE WASHER (For insulation)
C. BRASS CAR WHEEL (With oversize hole in center for air gap insulation)
D. BAKELITE WASHER (For insulation and to keep wheel concentric)
E. BRASS WASHER (For mechanical bond to keep wheel in place and running true)

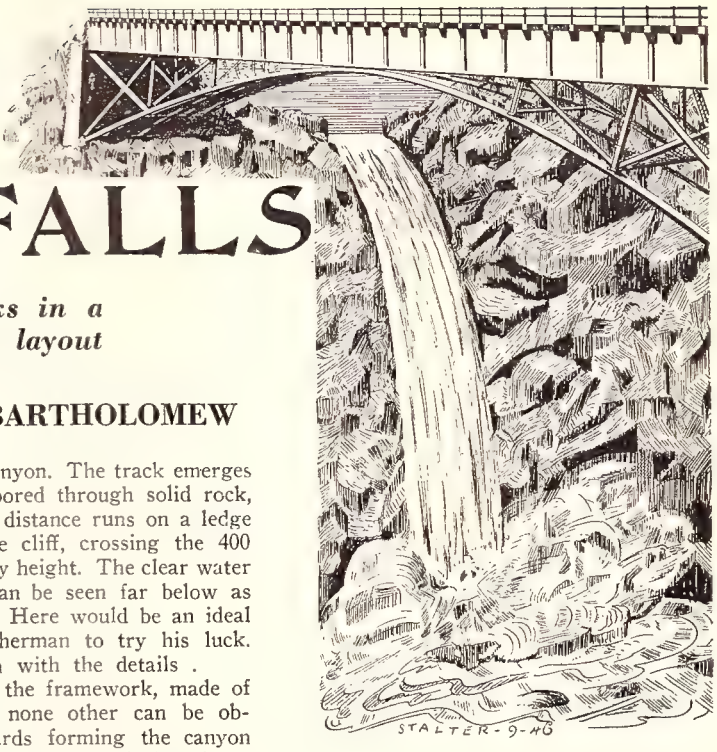
Send for our "HO" Catalog and Handbook
1942 Edition—Price 25¢

MANTUA METAL PRODUCTS CO.

"Pioneer and leader in HO gauge"

WOODBURY HEIGHTS NEW JERSEY

SPEAKING OF WATERFALLS

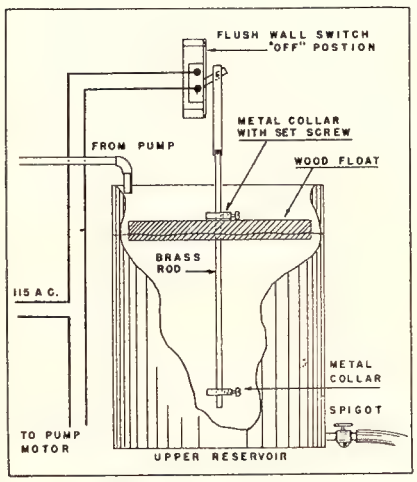


Real water cascading over rocks in a merry stream will make your layout actually "breathe"!

By L. A. BARTHOLOMEW

WAY out west where men are model railroaders, the Channel Railroad system, large O gauge 2-rail layout of the Channel Railroad Club, has a deep canyon with reddish looking rocks on its steep sides. Halfway down the canyon, a high water fall spills over a rocky ledge under a gracefully arched railroad bridge of the mountain division. In the deep canyon below the falls, the water is carried away in the rapids under the high plate girder bridge spanning the gorge. The bridge itself rests on sturdy steel lattice work bents.

It is a double tracked bridge, carrying the main line traffic of the Channel Lines from Fremont on the West to Channel City on the East. This was quite an engineering feat to bridge the vast chasm of Red Rock Canyon. The track emerges from a tunnel bored through solid rock, and for a short distance runs on a ledge blasted from the cliff, crossing the 400 ft. span at a dizzy height. The clear water of the stream can be seen far below as it rushes along. Here would be an ideal spot for the fisherman to try his luck. But let's get on with the details .



First there is the framework, made of crate lumber if none other can be obtained. The boards forming the canyon walls are nailed in near vertical position, forming a rough V-shaped trough. The bottom and sides of the canyon are then lined with heavy roofing paper that has first been heated in the sun until soft and pliable. Give it plenty of "lap" where pieces are joined and tack only where there will not be any water.

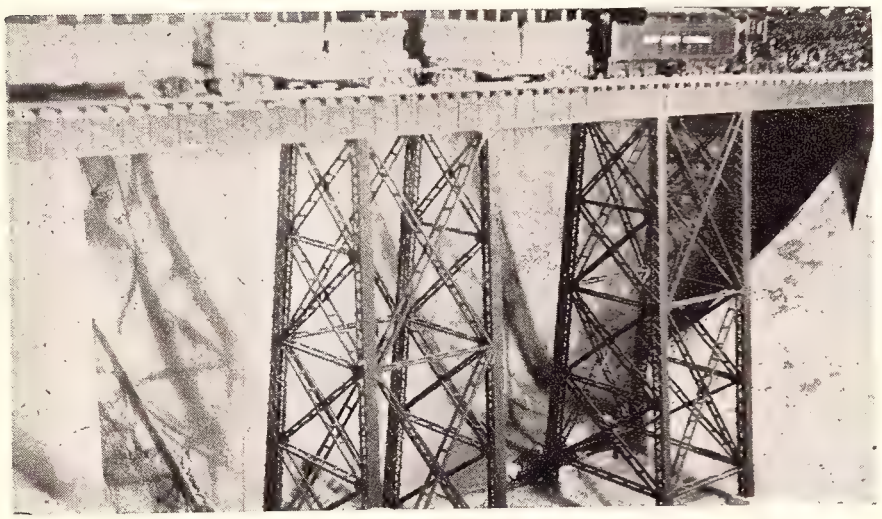
Ordinary fly screening is next shaped to fit over the roofing paper. Use tacks sparingly and only above the water line. Expanded metal lathe can be used to form the ledge over which the water fall plunges. Metal lathe should be cut and formed to the desired shape and attached to the screening with fine iron or copper wire. Shape it to the same general lines as a pitcher spout.

Now mix a small basin full of portland cement and water until it is quite thin, applying the mixture to the screening with a small paint brush. It may be necessary to put on several coats. A thicker mixture should be used for the water fall lip, applying it with a small pointed trowel. The cement will set rapidly so it is advisable to work fast with each batch. After covering it thoroughly, allow it to dry for several days and then give it another brush coat of cement and water to which a small amount of anti-hydro has been added. This mixture sets rapidly, leaving a hard and waterproofed surface.

Once the last coat of cement is thoroughly dry, give it a coat of dark red paint. When this has dried, add some dabs of brown and green to imitate earth and foliage. A splash of yellow here and there will improve the looks of the job. Once the paint has dried, form a rocky bed in the creek with round stones that have been picked up at the beach or in a stream bed. These should be kept about the size of a hen's egg. Gather some weather-beaten twigs and small branches from a stream or beach. Arrange a tangle of logs at places where a natural jam would occur—a fallen log across the stream that looks like it had been left by high water. Make certain all are anchored firmly so the water will not float them down stream.

Build the canyon on a steep slant so that a series of cascades and rapids can be formed with rocks and cement. Trees and bushes can be added later in simple fashion. Smooth sticks of wood dipped in hot wax are set into the fresh cement and later pulled out, leaving spots to "plant" your foliage. The wax will keep the cement from sticking to the pegs. Trees and bushes can be either built up or purchased from your hobby dealer. Red Rock Canyon is still under construction and so is void of trees at present.

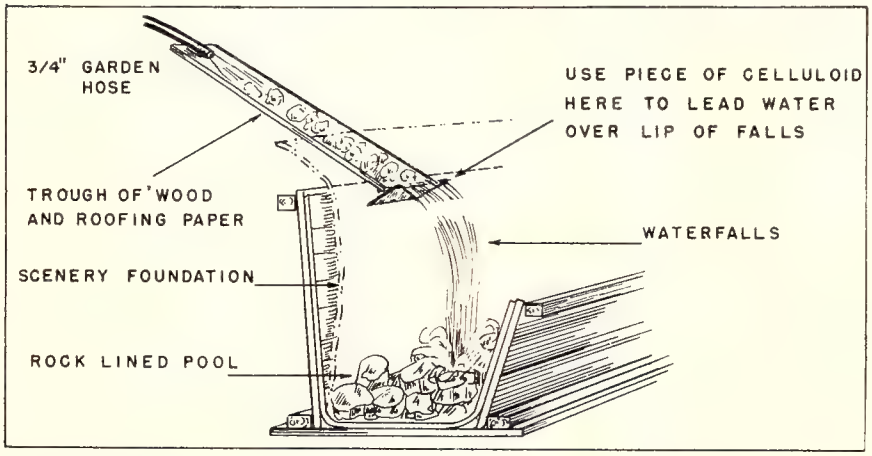
Water for your "river" can be taken direct from the city water supply as long as you make provision for drainage. If this is impractical, a pump will be necessary to circulate the water around, using it over and over again. A shallow pan about 2" deep and 14" x 24" in area, is used as a catch basin to end the stream. A 2" diameter pipe nipple is soldered in

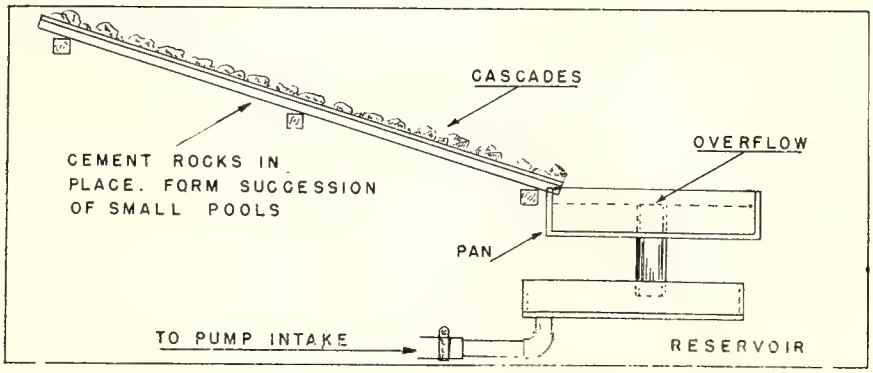


Lower Red Rock Canyon showing a portion of the lower catch pan.

Here we see the start of the Red Rock Canyon falls before it begins its merry trip down the rapids.

Water fall showing portion of double track bridge in foreground. Arched bridge carries the mountain division.


3/4" GARDEN HOSE
USE PIECE OF CELLULOID HERE TO LEAD WATER OVER LIP OF FALLS
TROUGH OF WOOD AND ROOFING PAPER
WATERFALLS
SCENERY FOUNDATION
ROCK LINED POOL



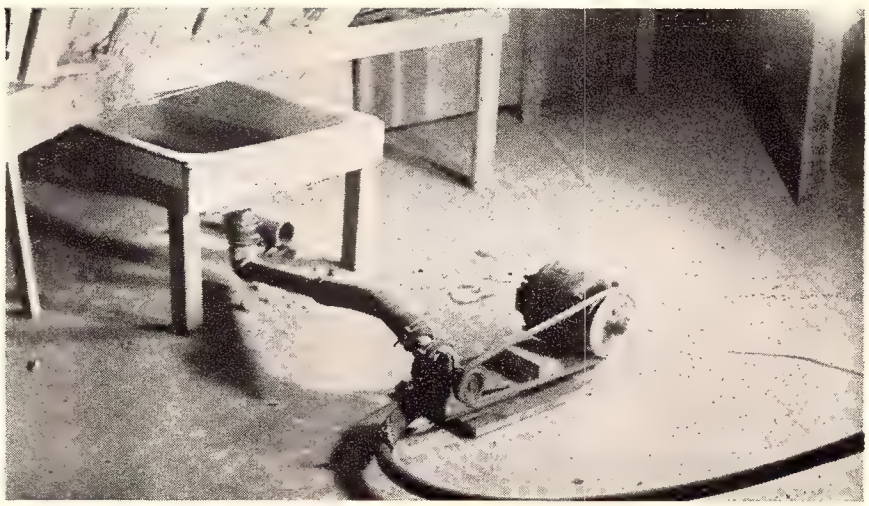
the center as an overflow. This should be ¾" below the top of the pan to permit a build-up of water level. Anything smaller will cause the pan to overflow.

The overflow from the pool empties into an ordinary kitchen sink concealed under the pool, serving as a reservoir. The tailpiece of the sink is connected to the intake of a washing machine pump which is belt driven by a ⅛ HP electric motor. The pump should operate at approximately 1800 RPM to raise the water six feet. A ¾" diameter garden hose takes the water from the pump to the top of the upper rapids which starts two feet above the waterfall.

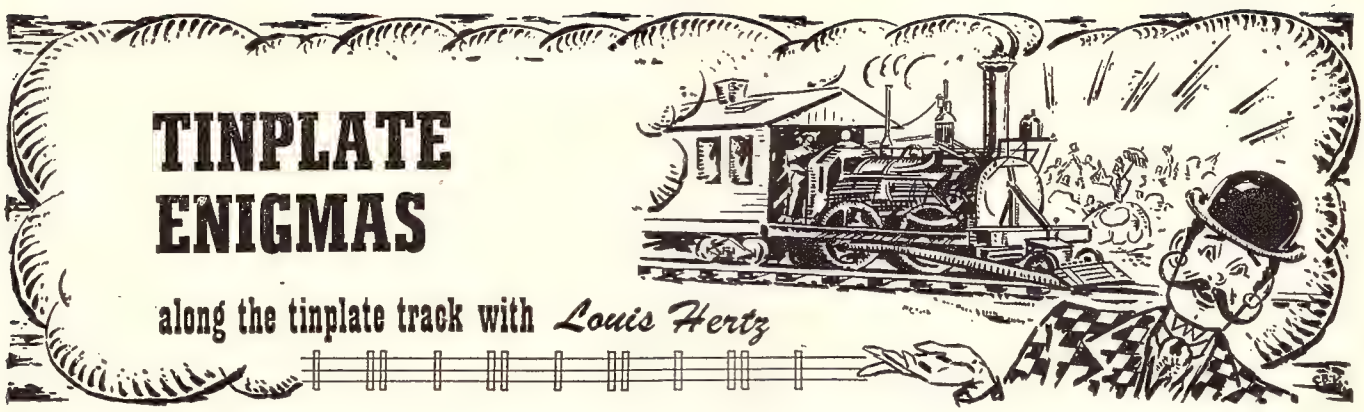
It would be wise to use some form of strainer over the pump intake to keep out small twigs and stones that might wash in and injure the impellor. If the washing machine pump delivers too much of a flow, there is not much that can be done, as choking either the intake or discharge will stop it from working properly. One way of getting a control flow would be to use two reservoirs, one at the top and one at the bottom. The top reservoir is arranged with a float actuated switch which shuts off the motor when filled and again turns it on when empty.

Water is led from the top tank through pipes having shut-off valves to two or more streams (if several streams are to be controlled). The streams all end at the lower reservoir to which the pump is attached. The float, which can be a square block of wood that has been boiled in wax to exclude moisture, has a round hole bored in its center. The float moves up and down on a round dowel or pipe on which two stop blocks are attached. The dowel is attached to an ordinary wall tumbler switch so that when the water is at high level the float touches the switch and lifts it by means of the stop block attached to the dowel. The reverse is also true, for when the water level falls to a predetermined point, the weight of the float on the lower stop block closes the switch starting the motor. When the tank is full, the upward thrust opens the switch. Absolute control of flow is now assured.

All model railroaders realize the value of action in their layouts. Here is action at its height which will lend the perfect background for your mountain division!



Red Rock Canyon waterfall is operated by means of washing machine pump and motor.



TINPLATE ENIGMAS

along the tinplate track with *Louis Hertz*

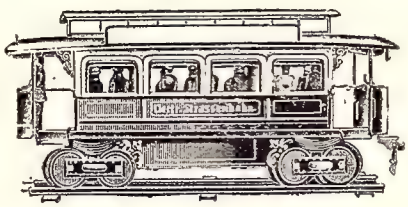
THE more we learn about tinplate history and the more problems that are solved, the more perplexing a certain small number of yet unsolved questions grow, remaining to perplex those who are interested in the subject. Occasionally, one or more of these points are definitely settled and it is hoped that in time, all of them will be cleared up to the satisfaction of those who follow the hobby. Possibly some of them never will be solved; perhaps the solution to one of the most intriguing will turn up tomorrow. A good number of such problems have been solved through the medium of this department, and whenever we mention any of them here it is with the hope that some reader will be able to supply us with the missing clue.

This month we are presenting a brief listing of some of the more important of these enigmas, the first time we have ever presented such a definite listing. Most of them are problems of long duration, questions which were puzzling Tinplaters a decade ago, and still remain to be answered. Some of them can only be answered definitely by locating an actual specimen of the model in question, or at least a very definite recollection of having seen or owned such a model. Because such a model has not yet come to light does not necessarily provide a final negative answer to a question if it were ever made. Tinplate trains turn up in unpredictable numbers at most unexpected times, and we have seen too many rarities—models about which we once chanced an opinion that none likely survived—suddenly turn up in quantities. Therefore, until we can obtain definite proof one way or the other—either positive in the form of the model itself or memory of actually seeing one, or negative proof in the form of cancelled listings from a catalog or recollections of workmen, etc.—the questions of whether these models were made or not, remain open. The burden of proof on either side is obviously a hard one in most cases. Perhaps some of you reading the following list will be able to supply a definite answer; at any rate, for those who like to ponder these matters, here is a brief survey of some unanswered problems:

1: Did Ives ever manufacture a 4-4-0 No. 1129 No. 1 gauge electrically driven steam type, or was the No. 1129 only made as a 2-4-2, as are all known existing specimens?

Ives introduced No. 1 gauge electric trains in 1912, and cataloged electric type locomotives only until 1915. The 1915 and 1916 catalogs list a 4-4-0 No. 1 gauge steam type, the No. 1129. The illustrations show this locomotive as virtually identical with the No. 1 gauge 4-4-0 clockwork locomotive, No. 40, which it is known was definitely made, so there is no problem of the usual possibility that "Ives found they couldn't swing a four wheel pilot truck on the engine. . . ."

In 1917, a 2-4-2 No. 1129 was cataloged and sold, a familiar model, well-known to most tinplaters. It is definitely known that this 2-4-2 was new in 1917 (made 1917-1921) and there is no possibility that



Not an enigma, but a very interesting model is this Carette No. 1 clockwork driven model of an electric street car, taken from a 1904 catalog. Most clockwork driven street cars were four wheel models.

the 2-4-2 was made and sold in 1915 and 1916 to those ordering from the 4-4-0 catalog illustrations. It was built in the same modern style which was new to Ives in 1917, and featured by them in their advertising to the trade at the time as a new creation. Men who worked at the Ives factory in this period are vague in their recollections concerning the 1129's when questioned. Some say they think it was made as a 4-4-0 as shown; others that they don't believe an 1129 was made until the 2-4-2. Here is a problem that will continue to puzzle and intrigue us until an answer is found.

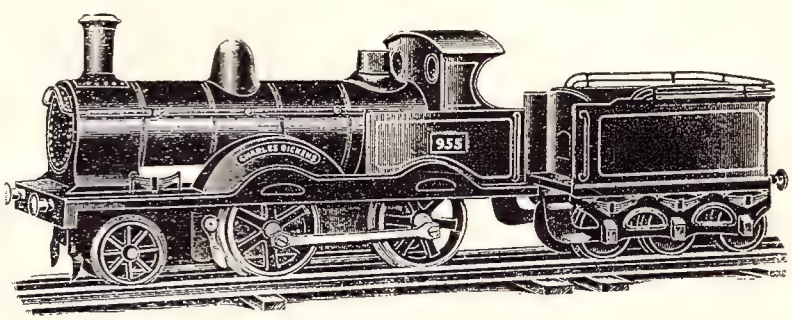
2: In 1929, Boucher cataloged a new series of four 20" passenger cars: combination, coach, Pullman and observation. Catalog illustrations show these cars in identical style of the earlier Boucher cars, cut-out clerestory roofs, an arch over each pair of Pullman car windows, etc. These cars are entirely different in style from the familiar late series Boucher "Blue Comet" passenger cars. Even the trucks shown in the catalog illustrations differ from the six-wheel trucks used by Boucher on the "Blue Comet" cars and generally resemble the contemporary American Flyer six-wheel trucks instead.

Boucher used illustrations of these cars alone and in sets in all their catalogs up to when they discontinued making trains, but there has always been a question in the minds of tinplaters whether Boucher made this intermediate series of cars between their earliest 18" models, which they took over from Voltamp, and their late "Blue Comet" cars, or whether the 1929 illustrations simply were made from some handmade sample cars and if the actual cars were the "Blue Comet" series. Incidently, the numbers on the old 18" cars and the 1929 20" cars were the same.

Careful study of Boucher catalogs would seem to indicate that both series of long cars were made. The 1929 issue pictures a train complete with all four types of cars with the cut-out clerestory roofs and states that the train is "exactly as illustrated above." The last Boucher catalogs appear to make a distinction between these and the "Blue Comet" cars, although they always used the 1929 illustrations, yet no one we have questioned about this has been able to recall actually having seen the 1929 model cars.

3: In 1928, Ives cataloged their 3254

(*Continued on page 56*)



A Bing-built model of the British locomotive, "Charles Dickens". This clockwork model was made in both No. 1 and No. 2 gauge, and was a favorite among model railroaders of the early 1900's.

Does Your layout have a Church?

By CPL. R. C. OVRESAT

THE midwestern church found in so many of our small country towns has a certain charm about it. This charm seems to be in their simplicity. A slender steeple poking above a community of roof tops is a familiar scene to all of us. It may be displaying a shiny coat of white paint or that familiar tattle tale grey of Mother Nature, but it does exemplify the true American spirit. It's the kind of structure that will add a homey touch to your railroad scene. The church would be equally at home in your village or somewhere along the main highway. They were build to serve the people and who knows how many people live on the farms tucked away in your backgrounds.

This model was built to HO gauge and any specific dimensions mentioned here are for HO scale. If you're an O gauger or other scale fan, put your brain to work for a half second and you'll have no trouble at all. Of prime importance is keeping everything in proportion. The rear view of the church is drawn full size for HO and most measurements can be taken directly from this plan. Other views have been simplified for clarity, however they give the location of doors and windows and lengths of the various sides.

Lay out all the walls on heavy cardboard, drawing in door and window locations. Cut out each wall individually as well as the necessary cut-outs. The arched windows are rather difficult to cut out smoothly but can be cleaned up by using a wood burning pencil on the edges. Make a double set of tracings of the openings onto some filing card stock. One set will be used for sashes and the other for frames. Set them aside temporarily.

This next operation may not appeal to all of you fans but is well worth the extra trouble—the application of actual siding to the walls. At one time, the clapboard siding of my church were so many filing cards. Use judgment in cutting these strips to suit your own gauge. For HO gauge, use ruled cards which come 4" x 6" in size, cutting along the ruled lines as this width is just right. Remember, the width of the strip will not be the width of the board, for each succeeding board overlaps the preceding one. (See plans). When you are ready to apply the strips, start from the bottom and work up, covering the entire wall—windows and all. The strips can also be allowed to protrude from the edges of the walls. What shouldn't be there, can be trimmed off later when the siding is dry. If this procedure doesn't appeal to you, score in your siding when the paint job is completed.

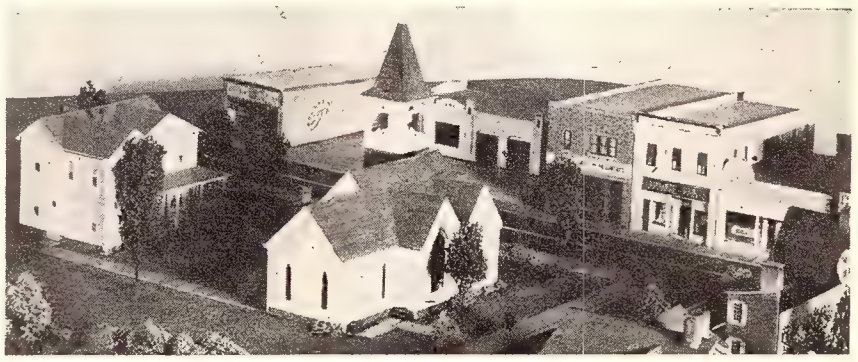
Now is the time to add the window frames. Take one of the two sets of tracings made of the window and door openings. Make a tracing identical in shape to the one already on the card but approximately 1/16" wider all around. Cut out the inner piece and the outer piece and you have your window frame. Repeat for all windows and doors and glue in place.

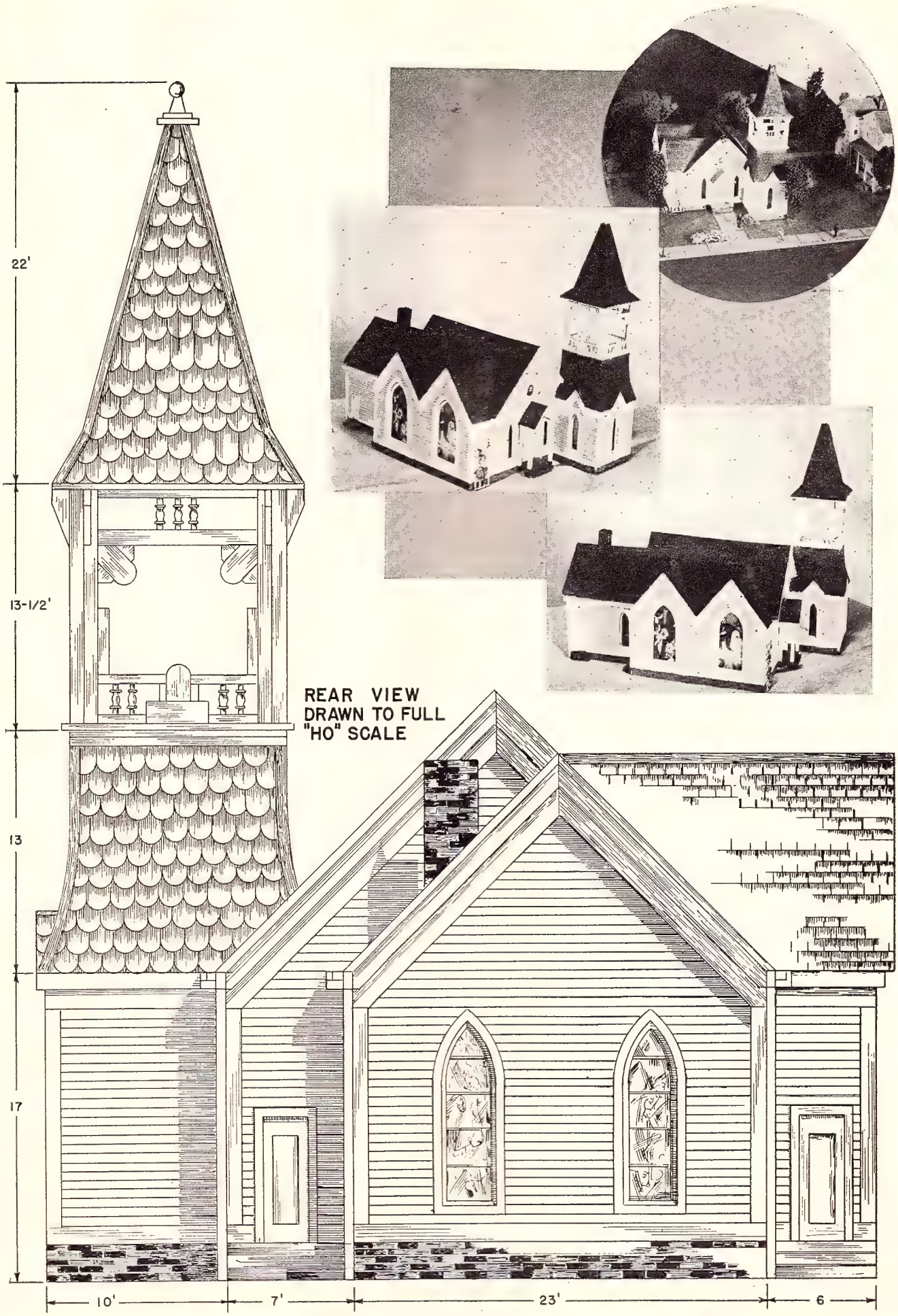
The walls can now be glued together, bracing the corners with wood strips to prevent warping. Add a strip of brick paper around the bottom to form your foundation. Corner trim is made from filing card stock. Cornice work is made from a strip of filing card and some 1/8" x 1/16" balsa. Apply the cornice work before starting on the roof. The window and door sashes can also be added now. Draw a border about 1/16" inside the pattern already on the card and cut out the inside portion; glue this frame in position. Doors can be built up from several layers of file cards.

Now we will roof the main part of the church, leaving the tower for last. The photos will give you a good idea as to size. The roofs should extend about one scale foot over the front and rear of the church and flush with the cornice work along the sides. Use the same type cardboard for the roof as used on the walls. Here again, shingled roofing is used as shown on the plans. Strips of filing card are cut to the width of the lined spaces. Cut slits at close intervals about 1/8 the width of the strips. Glue in place with each strip overlapping the preceding strip, again working from the bottom up. Glue small strips of card on the ridges and in the valleys of the roof. Fasten the chimney in place by the furnace room with brick paper smudged at the top.

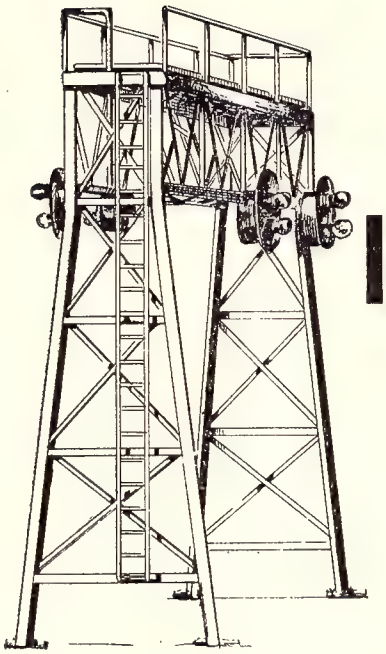
Construction of the lower roof on the tower might seem tricky but is not difficult. It is best to build some framework as suggested in the plans, gluing pieces of filing card onto the formers to give you the proper shape for the roof. Your job will not have to be perfect as the shingles will cover any errors. Notice that the shingle job on the tower is different from that on the main unit. Individual shingles were cut out with a particular type punch I had available. These were then glued in position, one overlapping another. Strips of filing card are used at the edges. The bell tower, minus the bell is next. At the time I built my tower, no bell could be located, so here's wishing you better luck. The base of this part of the tower is two pieces of heavy cardboard. All four sides of this unit are identical. The pillars can vary in size at the four corners but keep them in proportion. Use 1/8" square balsa for corner columns and flank these with a 1/8" x 1/16" column on the insides. Ballisters are ex-ship stanchions purchased at the local hobby store. Use 1/32" bass or other wood for the trim in the upper corners. Now for the steeple. If you want to follow a formula to get your roof right the first time, remember that the square of the hypotenuse is equal to the sum of the squares of the other two sides (this sounds like work—better use the experimental methods.) Shingle the steeple, glue on the top piece and the job of roofing is complete.

(*Continued on page 58*)




22'
13-1/2'
13
17
REAR VIEW
DRAWN TO FULL
"HO" SCALE
10'
7'
23'
6

PERSPECTIVE VIEW OF LOWER TOWER ROOF FRAME WORK (NOT TO SCALE)
FIRST CUT SLITS HALF-WAY INTO THE STRIPS (NOT TO SCALE)
THEN FOLLOW THROUGH AS ABOVE
IN MAKING SIDING EACH STRIP IS GLUED HALF-WAY OVER THE PRECEEDING STRIP
TOP VIEW
FRONT VIEW
46'
1/2 "HO" SCALE
LEFT SIDE VIEW
RIGHT SIDE VIEW
15'
36'
20'



A SIMPLE INTERLOCKING PLANT

By J. R. HUME

PART 2—SIGNAL PLANT & BRIDGE

WITH the roadbed and chassis completed from last month, you are now ready to build the signal plant and signal bridge. The type of signal system which you may want to install may differ from the one described, in which case you will have to alter the circuits to suit. A semaphore system cannot be readily installed in a small scale signal bridge. I use three light signals—Red for Stop, Green for Proceed (main line open) and Amber for Caution (low speed route open). Although this is not in accord with prototype practice, it gives a realistic appearance and keeps the signal bridge from looking like an over-dressed Xmas tree! No distant signals are used. The considerations of design and construction of the plant as described, may be of assistance in designing the circuits required by another system.

This system is an integral part of the yard throat and was designed with the same considerations of portability. Signals are operated by the track circuits, thus giving a positive indication that the actual track settings are correct. The relays are operated from the 12-volt directional control track circuits. In addition to the leads described in the previous article, three leads are required. Two are for the 2½ volt a. c. lighting circuit and one for the direct return wire to the negative connection of the power supply. This system will not interfere with a block signal and A. T. C. system if the latter were installed to operate from the outer, or normally positive rail. The work sheet used in designing the signal circuits and resulting circuits are shown in fig. 1.

The most interesting part of this project for me was the design and construction of the signal interlocking machine. As I had never read an article on the design of the required relays, I started from scratch with the Electrical Engineer's handbook. The "direction of travel" relays (E and W of figs. 1 and 4) were wound first. These relays are energized whenever the controls are set for reverse operation of the respective main line and therefore should be as economical as possible. On the other hand, relays "CC" and "T" are energized only when the switches are thrown and therefore need not be so economical. Fig. 1 includes a signal work sheet with a diagrammatic sketch of the layout. The left column shows all possible combinations of operation through the interlocked throat, a total of 12 in all. The next four columns show the polarity of each main line rail for each possible set-up. Letters and numbers used, refer to markings on the signal work sheet, wiring diagram, or in the event of connections outside of the Signal Interlocking System shown in fig. 1 last month. Columns "P" and "Q" show the positions of the two cutout switches on the control board. The remaining columns show the lights which are lighted for each set-up.

When both tracks are arranged for travel in the normal direction none of the solenoids are energized, signals "1" and "4" show Green and "2" and "3" will show Red. If the turn-out into the yard is open, relay "T" will be energized and signal "1" will show amber.

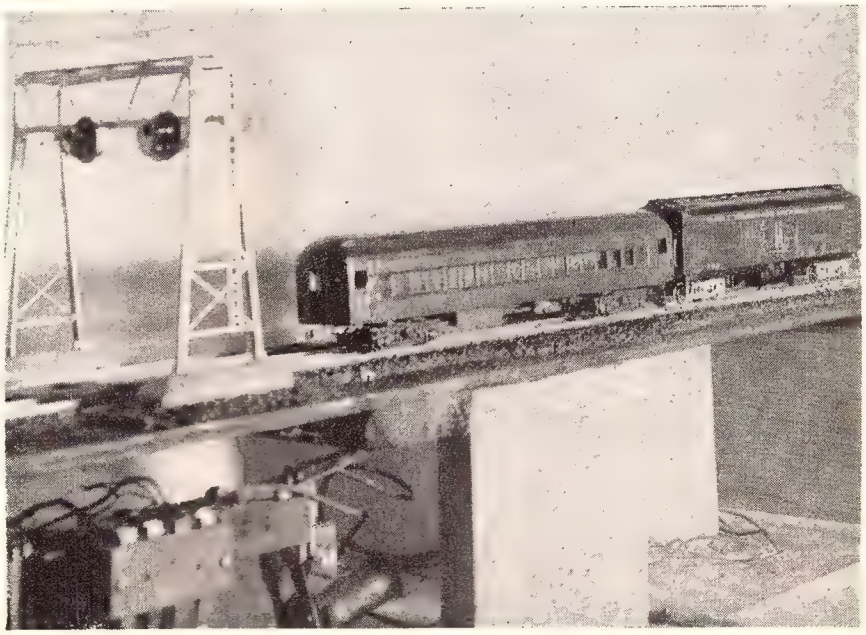
With both tracks arranged for operation in the reverse direction, relays "E" and "W" will be energized as the inside rails are now positive and signals "2" and "3" will show Green and "1" and "4" will show Red. If the turnout into the yard is open, relay "T" will be also energized and signal "3" will show Red.

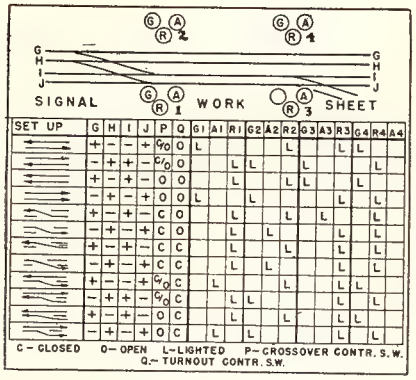
From the preceding two paragraphs, it will be seen that relays "E" and "W" are identical direction of travel relays. They must be double-pole, double-throw, as they select between Red and Green on all four signals. In the actual model, a single armature contact is used as it is connected to one side of the lighting current supply. These relays must operate on as low an amperage as possible as they are energized continuously when the respective tracks are reversed. Relay "T" must be a DPDT relay as it selects between the Amber and the Green on Signal "1," and Red and Green on signal "3."

With either track circuit reversed and the other set for operation in the normal direction, relay "CC" will be energized and signals "2" or "3" will show Amber and all others Red. Either one of relays "E" or "W" will be energized depending upon which track is set in reverse direction. Therefore relay "CC" must be a four-pole, double-throw relay as it selects the lights on all four signals. The wiring diagram shown was developed to show these proper signals and after being drawn was checked back with the work sheet.

For lighting power, a 2½ volt radio transformer was used, which was obtained reasonably at a radio supply house.

Fig. 4 shows construction of the chassis of the signal interlocking machine. Pieces "X" are, as previously described, a permanent part of the roadbed construction and the Base "a" was previously fitted to them. Pieces "a," "b" and "c" were assembled using number four wood screws and the "a" was temporarily fastened to the edge of the table. After completion of construction and wiring, the complete unit was lifted and installed on the brackets "X" by means of two #6 wood screws. Thus the chassis can be removed for adjustment and re-installed in the box

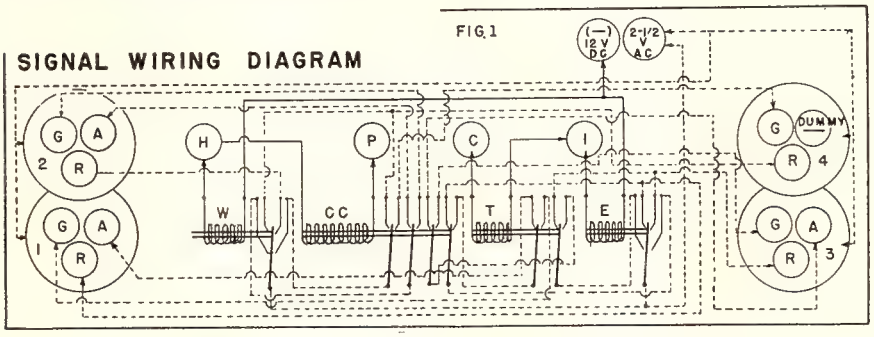




relays as they are so constructed that gravity returns them to the contact position in the de-energized position. Use #22 wire for all connections except the leads going to the lights. It was necessary to thread #28 wire through the conduits.

SIGNAL BRIDGE

The signal bridge is constructed in part of commercially obtainable brass shapes. The cost amounted to less than three dollars with a quantity of material left for other use.



without disturbing the wiring. The Plate and its table of dimensions show the material and size of the various parts. All relays are designed to operate without over-heating on a continuous circuit of 14 volts. If you use another voltage, you must alter your coils accordingly.

No attempt will be made to describe in detail the construction of the relays as there have been many previous articles on relay construction and other types may serve as well as these. Suffice to say, that I used stiff phosphor bronze for my moving contacts, carriage bolts for the cores of the coils, and "five and dime" brass hinges for fulcrums. If rectified current is used as in this installation, the armature must make contact with the core so that the residual magnetism will hold the relay closed through the zero point of the cycle, thus preventing chattering and flickering of the lights. It may also be noted that no springs are used on the

LIST OF STRUCTURAL PARTS			
PART	No. Pcs.	MATERIAL "O"	MATERIAL OO—HO
A	2	3/64"	1/32"
B	6	1/8"	1/16"
C	2	3/16" x 3/16"	1/8" x 1/8"
D	2	3/16" x 3/16"	1/8" x 1/8"
E	1	3/64"	1/32"
F	5	1/8"	1/16"
G	2	3/64"	1/32"
H	2	22 gauge — sheet brass	
I	4	3/16" x 3/16"	1/8" x 1/8"
J	2	3/64"	1/32"
K	10	3/16" x 1/16"	1/8" x 3/64"
L	6	3/16" x 3/16"	1/8" x 1/8"
M	4	3/16" x 3/16"	1/8" x 1/8"
N	2	Ladder strip — suitable for gauge	
O	1	Handrail wire — suitable for gauge	
P	10	Drilled holes—size of handrail wire	
Q	11	3/16" x 3/16"	1/8" x 1/8"
R	4	Wooden blocks — scale from drawing	
S	2	3/32" brass tubing	
T	4	See details — Plate	
U	4	Soft wood — 1/32" thick	
V	1	3/64"	1/32"

Construction is all-soldered, resulting in a very sturdy model. A half-pound stove heated iron was used for all accessible joints and the electric iron only where absolutely necessary. The smaller electric iron required an appreciable period of time against the metal, during which time heat was conducted through the metal to melt the solder of adjoining joints. Heat the large iron up and apply it only momentarily to the joint. When using the electric iron, apply a wet cloth to adjoining solder joints.

Fig. 3 shows the plans for the bridge and its construction. As the shapes used come in standard sizes, exact scaling cannot be used. The LIST OF STRUCTURAL PARTS shows the sizes of such standard material required to manufacture each part in all the common gauges. When it is considered that 1/8" represents 10", in HO and 9" in 00, and that 3/16" represents about the same figure in O, it will be seen that these recommendations are very close of scale.

Design follows Pennsylvania R. R. practice in general, but is modified to all-welded construction in order to eliminate the gusset plates which are impracticable in small scale.

First make up the soldering jigs for the girder and uprights. These are shown to 1/8" scale, the same as the plan for the signal bridge. By comparison between these drawings, the correct location of each item can be determined. A solid piece of soft wood formed the jig for the girder. The length is slightly shorter than piece "c"; height about one inch greater than length of "b"; thickness is length of "f" less twice the flange angle "d." To permit removal of jig from completed girder. Black lines indicate saw cuts to accommodate "a" and "e." White portions indicate deeper and wider cuts to accommodate "b," "f," "m" and the flange of angle "d." Shaded portions are the original surface of the wood. It is necessary to make the top and one side only.

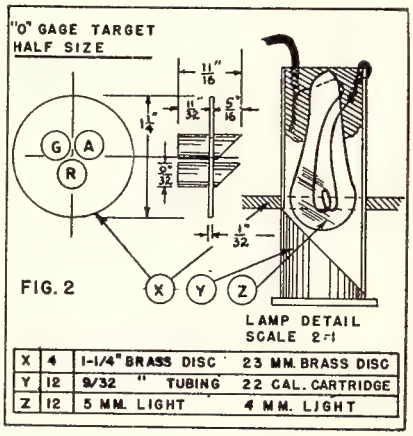
The actual base for the jig of the uprights is a piece of soft wood about two inches longer and two inches wider than that shown in fig. 3. In this drawing, the white space indicates the surface of the baseboard. Shaded pieces are of soft wood, equal in thickness to the width of columns "m" and I-beams "l." They are dimensioned so that these pieces fit outside of the raised portion. Black sections are saw-cuts to accommodate "j" and "k." The round blobs of black are made with a countersink and are intended to give the soldering iron a chance at the intersections.

In making up the members, it is well to remove them from the jig after each operation, straightening them as necessary and then replacing them in the jig before the next step. By checking for squareness, much labor will be saved later.

First take a piece of square brass to dimensions given for "a." Bend it to fit the jig for the girder and trim to proper length. Cut pieces "b" and lay three of them in the jig. Cut angles for "c" and "d," fit them to the jig and lightly solder the joints between "a," "b," "c" and "d." Note that "a" and "b" are within the angle "c" and "d." Remove from jig, straighten as necessary and solder the joints from the inside. Make a duplicate of the above piece, using the same side of the jig.

Using the top of the jig, bend a piece of square brass suitable for "e" and fit into top of jig. Place one of the sides on the jig and solder "e" inside of angle of "c." Place the other side against the blank side of jig and again solder "e" inside of angle "c." Solder five pieces "f" on top of angle "c," lining them up with the slots in the top of the jig. This is as far as we can go with the girder for now. Remove from jig and again solder from inside.

Next make the two uprights. Piece


"O" GAGE TARGET
HALF SIZE
FIG. 2
LAMP DETAIL
SCALE 2=1
X 4 1-1/4" BRASS DISC 23 MM. BRASS DISC
Y 12 9/32 " TUBING 22 CAL. CARTRIDGE
Z 12 5 MM. LIGHT 4 MM. LIGHT

"j" is bent to fit the jig as a continuous zig-zag. Pieces "k" are shorter pieces bent up to intersect with "j." All intersections of "j" and "k" are fitted and soldered. Cut I-beam of various lengths to make pieces "l," insert them in the jig and solder the intersections of "j" and "l," "k" and "l." At this point, it is well to remove from the jig and make certain that the assembly is not warped out of true. Cut and bend up columns "m" to fit outside of the raised portions of the jig. Place on the jig and solder the intersections of "j" or "k" to "l" and "m." Note that the legs of the "H"

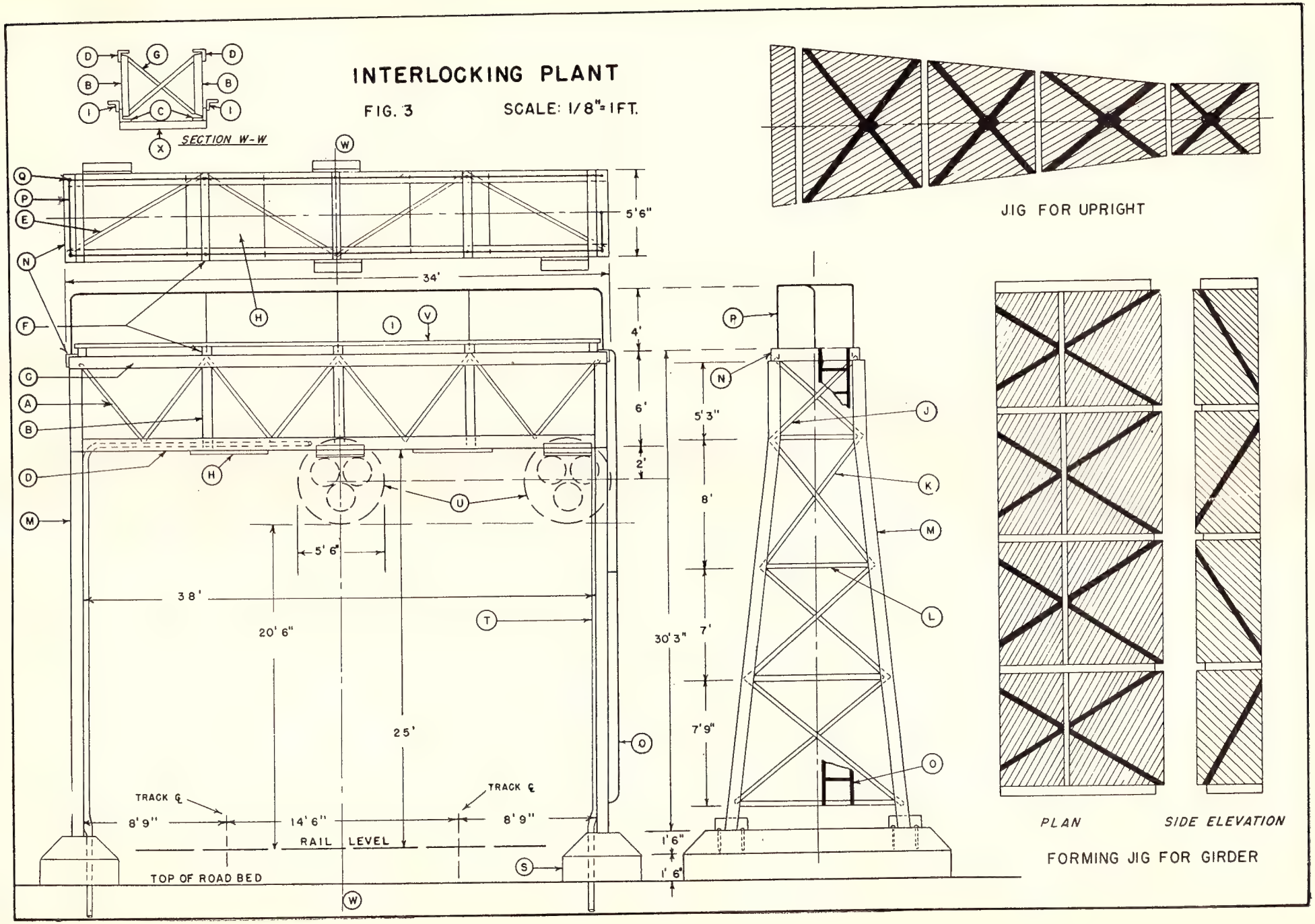

INTERLOCKING PLANT
FIG. 3
SCALE: 1/8"=1FT.
SECTION W-W
5'6"
34'
4'
6'
2'
8'
7'
7'9"
5'3"
1'6"
1'6"
30'3"
5'6"
38'
20'6"
25'
TRACK ℄
TRACK ℄
8'9"
14'6"
8'9"
RAIL LEVEL
TOP OF ROAD BED
JIG FOR UPRIGHT
PLAN
SIDE ELEVATION
FORMING JIG FOR GIRDER

TABLE OF DIMENSIONS		RELAYS E AND W	RELAY CC	RELAY T
Size or Wire	COIL	#34—Double Silk	#28—Enamelled	#34 Double Silk
Core Diameter		1/8" Flathead Nail	1/4" Carriage Bolt	1/8" Flathead Nail
External Diameter of Coil		5/8"	1"	1"
Length of Coil		1 7/8"	1 1/4"	1"
Number Contacts	CONTACTS	4 Contacts—2 Pos.	8 Contacts—2 Pos.	4 Contacts—2 Pos.
Size of Contacts—Phos. Bronz		22 gauge—1 3/4" x 1/4"	22 gauge—2" x 1/4"	22 gauge—2" x 1/4"
Number Insulation Pieces		4 Composition	4—Masonite	3—Masonite
Size of Insulation Pieces		1/2" x 1/2" x 1/16"	2 1/2" x 3/4" x 1/8"	1 1/2" x 3/4" x 1/8"
Number Moving Contacts	MOVING CONTACTS	1 Phosphor. Bronz	4 Phosphor B.	2 Phosphor B.
Size of Moving Contacts		2" x 3/8" x 1/32"	1 1/4" x 1/4" x 1/32"	1 1/4" x 1/4" x 1/32"
Size of Hinge (Brass)		3/8" x 3/4"	3/8" x 1 1/2"	3/8" x 3/4"
Size of Brass Plate		None	2 1/2" x 1" x 1/32"	1 1/2" x 1" x 1/32"
Number Pieces Magnet Iron		2	1	1
Size of Magnet Iron		1" x 3/8" x 1/32"	2 1/2" x 1" x 1/32"	1 1/2" x 1" x 1/32"
Number Insulation Pieces		None	2 Masonite	2 Masonite
Size of Insulation Pieces		—	2 1/2" x 1" x 1/32"	1 1/2" x 1" x 1/32"
Size of Mounting Angle		1 1/2" x 1/2" x 1/2"	None	None
Size of Mounting Plate		None	1" x 1" x 1/8"	1" x 1" x 1/8"

are parallel with the track and that they hide these joints. While in the jig, all soldering was done from the top and on the *track side* of the upright. Make an exact duplicate of this piece.

To assemble the signal bridge, place one upright in the jig, trackside up. Place the girder in its jig and file angles "c" so that they over-lap the tops of columns "m," which are filed off slightly to fit inside the angle. File the ends of "d" to fit flush with the inside surface of the girder. Holding the girder perpendicular to the upright by means of its jig, solder pieces "c" and "d" to "m." Remove the upright from jig and repeat process with other upright. Solder pieces of angle "n" to cover the joints between "c" and "m." Remove the jigs and resolder the joints from the inside as required. At this time, install the cross braces "g" at section "w-w." Because of the inaccessibility, they are merely crossed, not cut and fitted as the intersections of "j" and "k." The ends of pieces "g" are soldered to vertical pieces "b."

Next install the conduits "t." These are pieces of 3/32" thin walled brass tubing in all gauges. This is the smallest size which will accommodate three strands of double-silk insulated #28 wire, the smallest size suitable for the job. Three wires must be run through each conduit. This tubing scales 7", 6" and 4½" in the three gauges and is slightly over-size in the smaller two. This tubing should be laid inside of angle "d" and bent in a curve to parallel the columns for the two signals located between the tracks. The conduits serving the signals outside of the tracks terminate at angle "d." From this point down, the tubing parallels the columns, is sprung towards the track to clear the feet of the columns "r," and is then bent so as to be perpendicular to the bases and roadbed. Conceal them as well as possible and tack-solder in place. The four small pieces "r" should be cut and soldered in place at the same time. After the conduits are installed, the blast plates "h" may be shaped and installed as shown in fig. 3, as well as the four pieces of angle "i" which are supports for the signal heads.

Shape two blocks of wood "s" as shown on the drawing. By fitting the signal

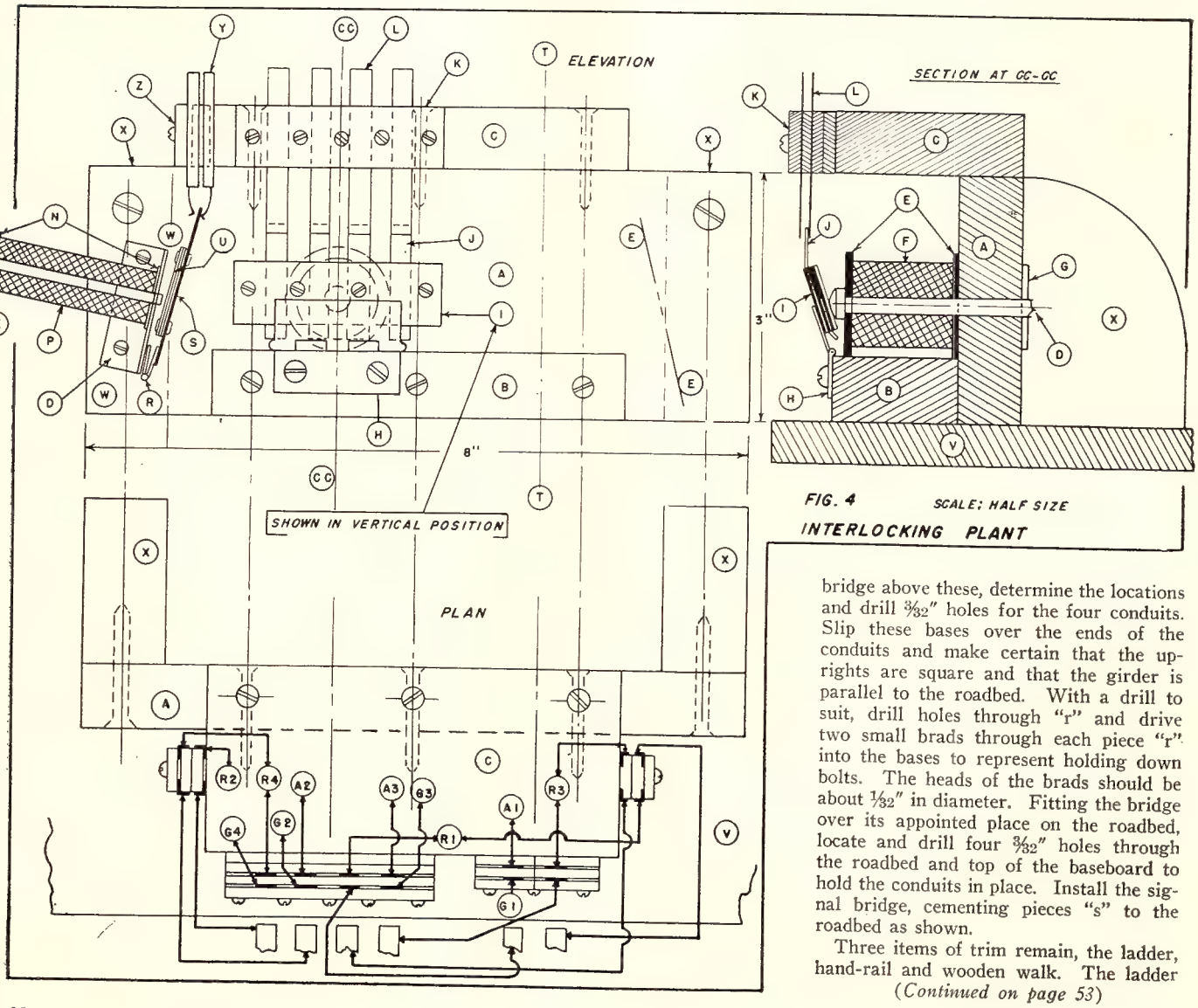


FIG. 4 SCALE: HALF SIZE
INTERLOCKING PLANT

bridge above these, determine the locations and drill 3/32" holes for the four conduits. Slip these bases over the ends of the conduits and make certain that the uprights are square and that the girder is parallel to the roadbed. With a drill to suit, drill holes through "r" and drive two small brads through each piece "r" into the bases to represent holding down bolts. The heads of the brads should be about 1/32" in diameter. Fitting the bridge over its appointed place on the roadbed, locate and drill four 3/32" holes through the roadbed and top of the baseboard to hold the conduits in place. Install the signal bridge, cementing pieces "s" to the roadbed as shown.

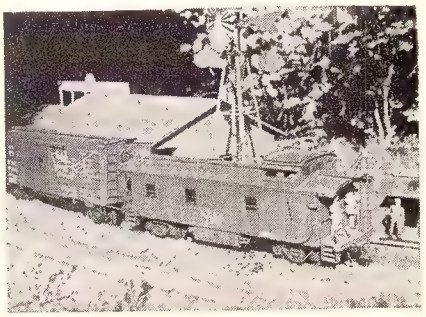
Three items of trim remain, the ladder, hand-rail and wooden walk. The ladder

(*Continued on page 53*)

Pike Registry Bureau

ALPINE, ATTLEBORO & EASTERN TRACTION CO., Walter Hulseweder, Brooklyn, N. Y. (HO ga)
APACHE LINES, Apache Model RR. Club of San Bernardino, Calif. (HO)
B & W CITY TRANSIT LINES OF AMERICA, C. M. Benson, Los Angeles & L. L. Westling, Jr., Oakland, Calif. (HO—Trolley)
BARNTOP & ALLEY RAILWAY CO., Jos. S. Frueh, Hopewell, Va. (O—Tinplate)
BEE LINE ELECTRIC RAILWAY, Howard Perry Ellis, San Antonio, Tex. (O)
BERKELEY & CARTERET RAILROAD, Thomas McCormick, W. Orange, N. J. (O)
BOSTON & BUFFALO LIMITED, D. Bruce Gilbert, Buffalo, N. Y. (O)
CALIFORNIA ELECTRIC RAILWAY, R. R. Reynolds, Long Beach, Calif. (HO—Trolley)
CALIFORNIA TRACTION SYSTEM, Chas. M. Benson, Los Angeles, Calif. (HO—Trolley)
CAROLINA CENTRAL RAILWAY, Rev. Eugene L. Nixon, Columbia, S. C. (HO)
CASEY LINES, Kenneth E. Caulking, Galveston, Texas (O & O27—Tinplate)
CAYUGA WESTERN, R. Loveless, Rochester, N. Y. (HO)
CENTINELLA PACIFIC RAILWAY, Bill Rogers, Huntington Park, Calif. (O)
CENTRAL ELECTRIC RAILWAY CO., Stanley O. Chausse, Toledo, Ohio (HO)
CHARLOTTEVILLE & LINDALE RR., Chas. Steiner, Massillon, Ohio (OO)
CHICAGO & SALT CREEK VALLEY RAILROAD (Salt Creek Valley Line), Arthur L. Hellyer, Jr., Elmhurst, Ill. (HO)
CLAYTON VALLEY, F. Clyde Smith, El Monte, Calif. (HO)
DALLAS & SANTA FE, Wm. A. Goodwin, Dallas, Texas (O)
DELAWARE, LACKAWANNA & OHIO EXPRESS, Harold Filcaske, Bridgeport, Ohio (O)
DETROIT & NORTHERN RAILROAD, Wm. F. Voglesong, Trenton, Mich. (HO)
DINKY DALE, Capt. E. A. Driscoll, Davenport, Iowa (O)
EASTERN VALLEY, Ed VanLeer, Rochester, N. Y. (HO)
ECHO TRACTION LINES, Ralph E. & Gertrude R. Daschke, Somerville, N. J. (HO)
ECHO VALLEY RAILROAD, Ralph E. & Gertrude R. Daschke, Somerville, N. J. (HO)
EL CAMINO REAL RAILWAY, R. R. Reynolds, Long Beach, Calif. (HO)
ESSAR & ELM CITY, Peter Flanagan, Rochester, N. Y. (HO)
FAIRBURY CENTRAL RAILROAD, C. M. Benson, Los Angeles & L. L. Westling, Jr., Oakland, Calif. (O—Tinplate)
GOLDEN EMPIRE LINES, John F. Lawlor, Manhattan Beach, Calif. (HO)
GOLDEN MONTANA LINE, Rev. James W. Knorr, Jr., Chester, Mont. (HO)
GORY & DEFEATED RR., John Allen, Monterey, Calif. (HO)
GRANDVIEW WESTERN RAILWAY, R. W. Christensen, Des Moines, Iowa (3¼")
GREENE VALLEY WESTERN RAILROAD, Chas. G. Greene, East Orange, N. J. (OO)
GREAT LAKES CENTRAL, Claude L. Jarvis, Minneapolis, Minn. (HO)
GREAT NORTHERN, Bob Edgar, Valley Stream, N. Y. (O)
GULF CENTRAL, A. W. Nelson, Jr., Meridian, Miss. (Std. ga.—Tinplate)
HACK AND OFF RAILROAD, Harry Klock, Philadelphia, Pa. (HO)
ILLINOIS SOUTHERN, M. C. Cornell, Granite City, Ill. (HO)
INDIAN VALLEY LINES, R. R. Reynolds, Long Beach, Calif. (HO)
INTERSTATE TRANSIT LINES, INC., Walter Hulseweder, Brooklyn, N. Y. (HO)
JERKWATER CENTRAL, James W. Cook, Richmond, Calif.
KANSAS SOUTHWESTERN LINES, Jack N. Pfisterer, Arkansas City, Kansas (O)
KENTUCKY NORTH CENTRAL, Wm. E. Hunt, Carrollton, Ky. (OO)
KIT & KABOODLE RR. (The Shamrock Route), Dr. J. H. Fagan, New York, N. Y. (HO)
KODAK CITR MODEL RR., Kodak City Model Rail Assn., Rochester, N. Y. (HO)
LAKE HURON & WESTERN, Ronald H. Harrison, Indianapolis, Ind. (O)
LAKE SHORE & NORTHERN RAILROAD, Harold P. Buri, Detroit, Mich. (O)
LINDEN VALLEY, Robert Concannon, Rochester, N. Y. (HO)
LITTLE SANTA FE, Virginia & John Coy, Kansas City, Kansas (O)
LITTLE VALLEY RAILROAD, Leonard L. & Robert L. Root, Glenhead, N. Y. (O)
LITTLE WESTERN, Harold S. Roof, Corona, Calif. (¾" L.S.)
LONG ISLAND MODEL RAILROAD, Chas. F. Mueller, Elmhurst, N. Y. (O)
LOUISIANA TERRITORIES, Jack Pfisterer, Arkansas City, Kansas (O)
MACY STREET TERMINAL RR., C. M. Benson, Los Angeles and L. L. Westling, Jr., Oakland, Calif. (HO—Trolley)
McKENZIE & PINEAPPLE JUNCTION RAILROAD, Edward D. Pyzel, Pomona, Calif. (HO)
MINNEAPOLIS & MID-WESTERN, Claude L. Jarvis, Minneapolis, Minn. (HO)
NAUTILUS ROAD, Ronald L. Albert, Miami Beach, Fla. (HO)
OHIO UNION TERMINAL, Bob Lorenz, Fremont, Ohio (O)
PACIFIC SOUTHERN LINES, Raymond C. Walker, Los Angeles, Calif. (HO & O)
PENNSY & UNION PACIFIC THROUGH STATE RR LINES, Thos. H. Black, New Galillee, Pa.
PENNSYLVANIA & READING, Kenneth Chamberlain, Doylestown, Pa. (HO)
RAYMOND & PACIFIC, Howard Norman, Raymond, Wash. (O)
RIO GRANDE VALLEY RR., Geo. H. Rinaldi (Vet. II), Malden, Mass. (HO)
SAN GABRIEL VALLEY RAILROAD, A. F. Kaskel, Arcadia, Calif. (HO)
SENECA & WESTERN RAILROAD, Donald F. Kinnaman, Fostoria, Ohio (HO)
SHINNECOC & EASTERN MODEL RR., Wm. H. Beardsley, Pres., Robt. S. Grooms, Gen. Mgr., Amityville, N. Y. (HO)
SMOKEY VALLEY RR., Edw. Metz, Wheeling, W Virginia (HO)
SOUTHERN CANADA RAILWAY, R. A. L. Kerr, Leaside, Ont., Canada (HO)
SOUTHERN LAKE SHORE RR., C. L. Zabriskie, New York City (¾" L.S.)
SUNSET VALLEY ROAD, Richard W. Gleason, Anoka, Minn. (HO)
SUNSET WESTERN LINES, John H. Coyne, Massillon, Ohio (OO)
TARFU BELT LINES, Thomas A. Burch, M.D., San Francisco, Calif. (OO)
TEXAS & WESTERN RR. (Route of the Pioneers), E. F. Henry, Dallas, Texas (HO)
THE FORSHEE SYSTEM, Alfred A. Forshee, Belleville, N. J. (Standard Gauge 2⅛", ⅜" scale)
THE GREAT PLATEAU & BIDDLETON WESTERN RAILROAD, Barbara M. & George P. Wilson, Gardena, Calif. (O)
THE MOHAWK LINES, Morris L. Bailey, Mason City, Iowa (S)
THE MOUNTAIN VALLEY RAILROAD, Spiro M. Mendel, Dallas, Texas (HO)
THE SAN FERNANDO VALUEY SYSTEM, David E. Crawford, Havertown, Pa (HO)
WAUKEE VALLEY RAILROAD, W. G. Shephard, Bridgeport, Conn. (HO)
YERBA BUENA & EASTERN TRACTION CO., C. M. Benson, Los Angeles & L. L. Westling, Jr., Oakland, Calif. (HO—Trolley)

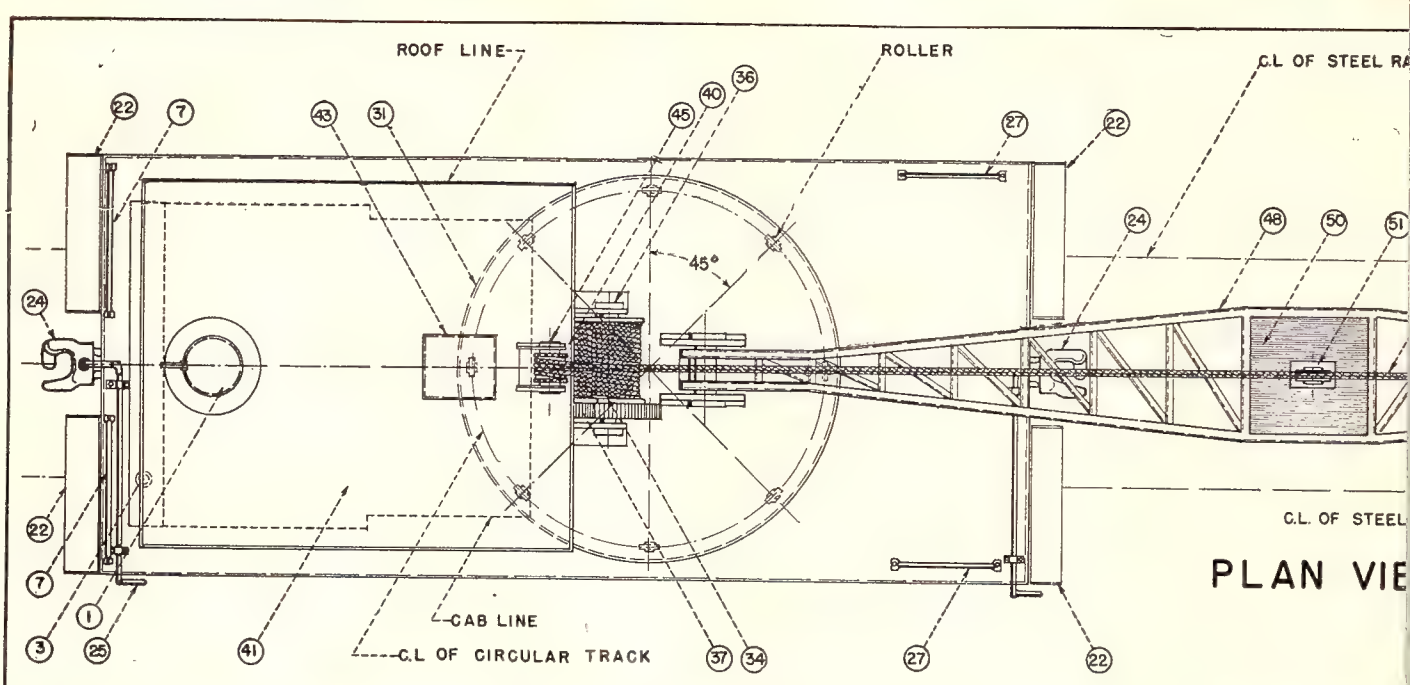
SANTA FE LINES



TAKE a good look at the excellent detail to be found in these fine photos, giving a cross-section of the Santa Fe Lines, hobby of H. S. and H. R. Howard, Pomona, California. It's all done up in one half inch scale, out-of-door variety.

All equipment is complete in interiors, lighting and other equipment. Berths make down, diners are set, doors and steps operate, streamliners are equipped with horns, lounge cars with radio, and even the markets are supplied with vegetables. Rolling stock runs in bronze bearings and locomotives in ball bearings.

Locomotives are two and four motors each, streamliners running four, eight or twelve motors to a train, depending on the number of coaches. Their equipment consists of all types of freight and passenger Santa Fe stock, Pullmans, diners, lounge cars, chairs, baggage and mail. A dynamometer car actually gives drawbar pull, speed current used, polarity, opens and shorts in track circuits. They have built half-inch for forty years now, recently offering the freight truck to the public. Many readers will remember seeing these models at the Los Angeles County Fair and at other fairs where they have been shown for the past ten years. These models have run up hundreds of thousands scale miles operating on K & D motors.



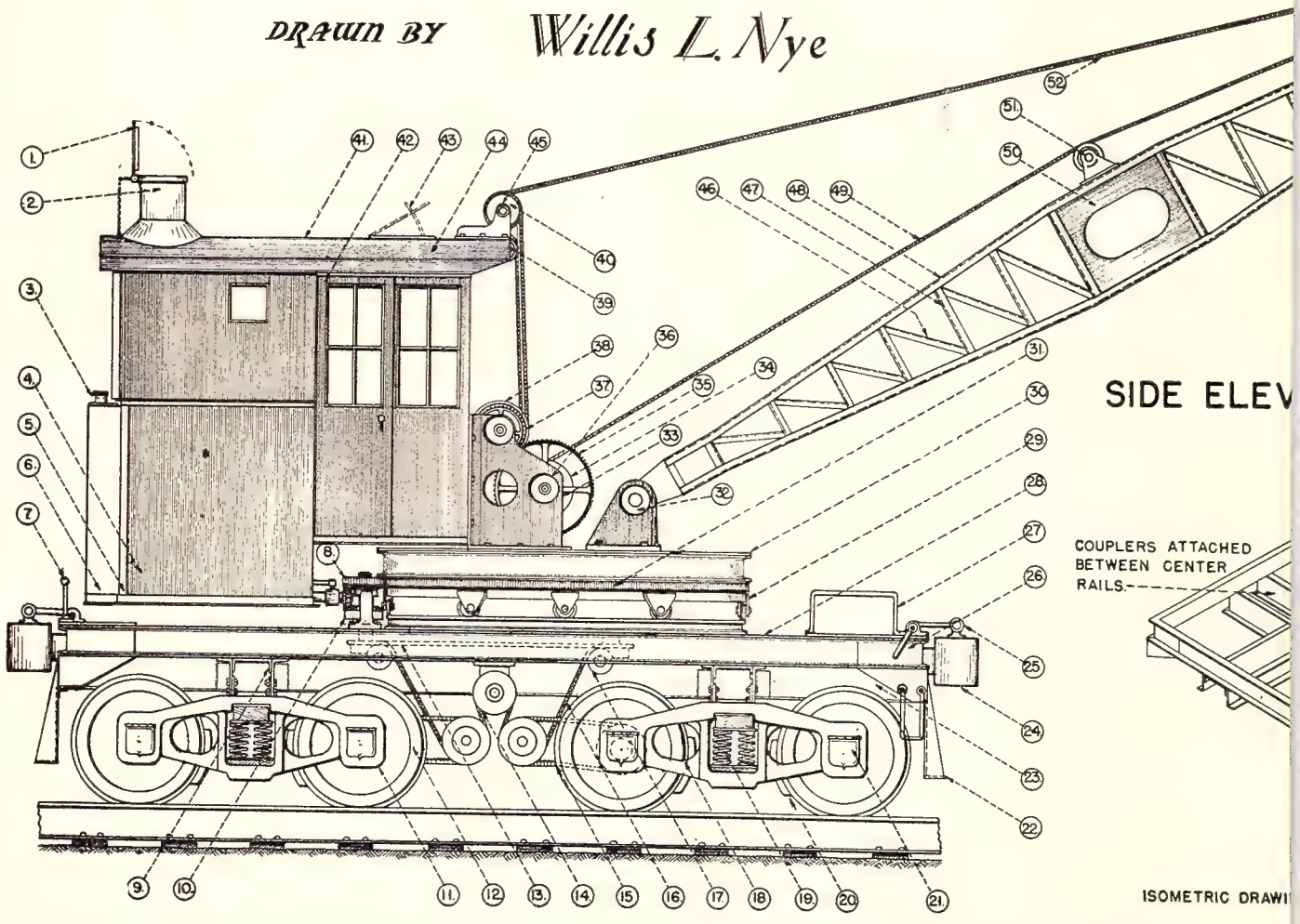
PLAN VIE

LOCOMOTIVE TRAVELING CRANE

0 1 2 3 4 5 6 7 8

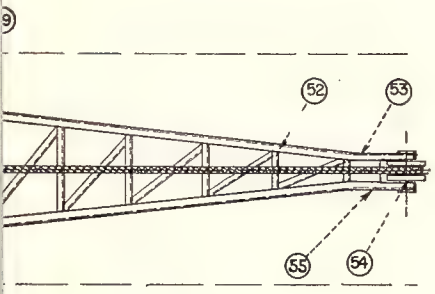
Scale ....

DRAWN BY Willis L. Nye

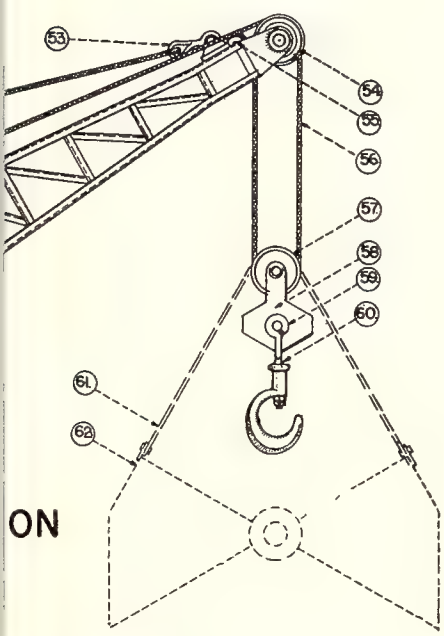


SIDE ELEV

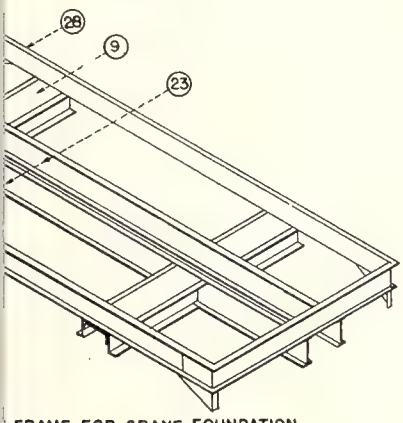
ISOMETRIC DRAWI



NOTE: ITEMS 52, 53, AND 55 OMITTED FOR REASONS OF CLARITY IN THIS VIEW.



ON



FRAME FOR CRANE FOUNDATION
(NO SCALE)

GENERAL:

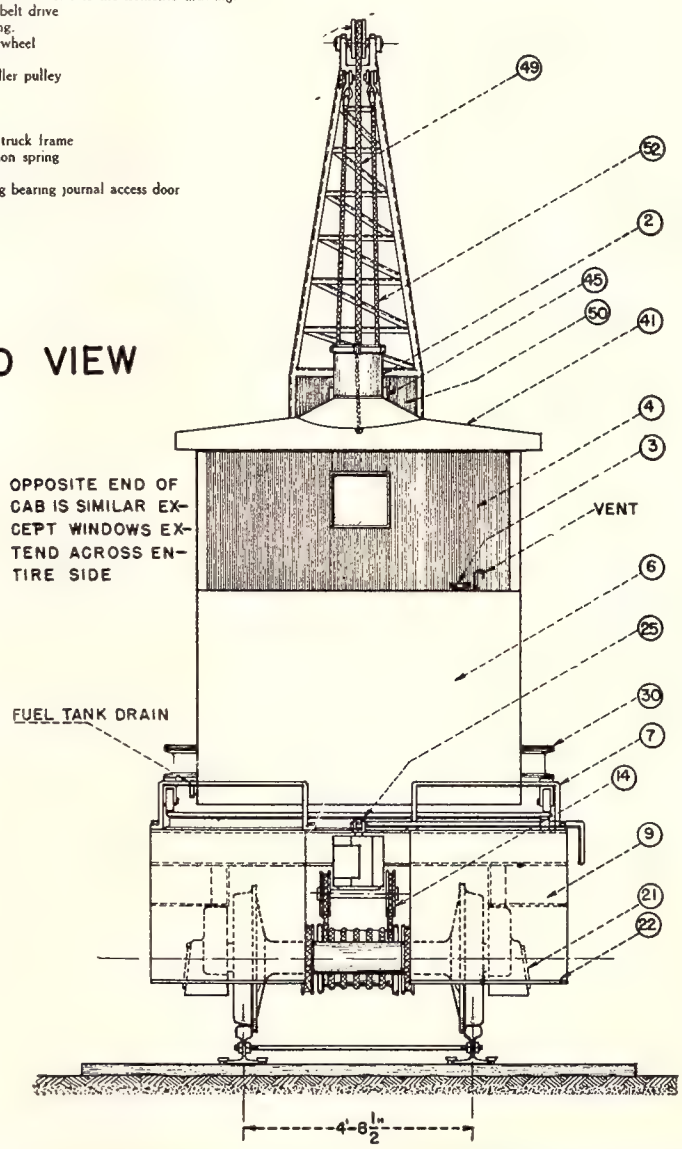
Locomotive traveling cranes consist of a flat car frame with four or eight wheels on the track. The upper frame can be rotated 360 degrees. The cab contains either a diesel or steam engine with the supplementary air compressors for the actuation of the brakes. The crane is self-propelled, this being accomplished by means of a special gear and belt drive mechanical arrangement. The boom is hinged to the upper frame and can be raised or lowered at will by the manipulation of controls inside the cab. The boom can be equipped with a hook for salvage or repairing operations or a grab bucket of the clam shell type. By raising or lowering the boom, the handling of loads at various radii may be accomplished

Travelling cranes function as portable hoisting engines, swinging derricks, grab bucket unloaders, or as a switch engine, lifting magnet, scoop shovel, drag line scraper, or as a pile driver. Locomotive travelling cranes having eight wheels such as shown in the drawing are extensively used in switch yards where materials are unloaded

In the drawing of the travelling crane, reference to the various parts is made by means of balloon call-outs. The definition of each call-out is given in the following descriptions. For those that have a desire to construct a locomotive crane similar to the illustration, it is suggested that standard size trucks be used and other parts reduced proportionately in size

1. Hinged cap on exhaust stack.
2. Exhaust stack.
3. Diesel or fuel oil tank filler neck and cap.
4. Steel siding over steel frame on cab
5. Steel angle frame.
6. Steel diesel or fuel oil tank
7. Hand rail.
8. Spur driving gear. This gear is actuated by the pinion gear which is adjustable in setting from controls inside the cab. In the forward position, the pinion gear actuates the spur gear which in turn causes the ring gear (31) to rotate and thus turn the whole frame and boom In the aft position, the pinion gear actuates a driving pulley and belt arrangement to provide motion to the whole crane car In order to move the car, the boom is centered The boom cannot be moved when the travelling crane is in motion.
9. Transverse channel brace. Refer to the isometric drawing.
10. Driving gear for the belt drive
11. Truck journal housing.
12. Standard freight car wheel
13. Belt drive.
14. Adjustable tension idler pulley
15. Belt drive
16. Belt drive.
17. Idler pulley
18. Cast iron freight car truck frame
19. Cylindrical compression spring
20. Iron brake shoe.
21. Truck journal housing bearing journal access door
22. End apron and step.
23. Longitudinal center channel frame.
24. Standard manually actuated car coupler.
25. Coupling pin.
26. End frame apron.
27. Hand railing.
28. Longitudinal channel car frame.
29. Circular boom foundation frame.
30. Circular channel frame.
31. Circular ring gear.
32. Bearing journal for the boom.
33. Winch frame.
34. Winch.
35. Main ring gear.
36. Bearing journal for the winch.
37. Ring gear spur type.
38. Cable drum.
39. Idler pulley
40. Idler pulley.
41. Steel roof of cab.
42. Sliding entrance door
43. Hatch for ventilation of cab.
44. Operator's position inside cab.
45. Bearing journal for idler gear.
46. Diagonal angle brace member.
47. Vertical chord member of boom truss.
48. Angle framework of boom, square in cross section of welded angles.
49. Grab bucket cable.
50. Steel spacer diaphragm.
51. Idler pulley bearing journal.
52. Cable to control elevation of the boom.
53. Cable thimble fitting.
54. Idler pulley.
55. Idler pulley.
56. Cable.
57. Pulley.
58. Steel hook fitting.
59. Swivel hook fitting.
60. Swivel hook.
61. Cable.
62. Grab bucket shown in dotted lines as an alternate.

END VIEW



A SHORT BAGGAGE CAR

By J. R. BARKLEY

MOST model railroads have at least one passenger train, primarily of the conventional design, not streamliner. The pullmans, day coaches, solariums and observation cars are a bit difficult to build, due to the presence of so many windows. Most modelers prefer to buy kits for these cars with the windows pre-cut. However when it comes to baggage cars, a different situation exists. The only windows are in the doors and these are so simple to construct that it is as simple to build this car from scratch as from a kit.

This baggage car, a 60-footer or a trifle over, is small enough to fit in any small branch line train, and not out of place in a heavy main line limited. Plans are exactly HO scale, 3½ mm to the foot, and other builders may easily convert by using an HO scale rule to find exact dimensions.

For HO scale, cut a piece of ⅛" wood to size for the floor. Allow for the thickness of the tin sides in figuring overall width, and the ends in figuring the length, 8⅜" x 1¼". Cut two pieces of tin exactly the same length and 1⅜" wide. Lay out the openings of the two doors on each side (same for both sides) and scribe them with a sharp ice pick. Place the side in the vise with the scribed line just even with the jaws. Use a sharp ¼" wood chisel and cut across the line by holding it at an angle and tapping the handle with a light hammer. Repeat all around openings. True up the hole with a file and smooth the edges. When this is done, flatten the sides by tapping very carefully with the hammer. Better still, place a flat piece of iron on the tin and tap the iron so as not to get any dents in the tin itself. Now we are all set to make the right angle bends, top and bottom. These will stiffen the sides making them into a form of channel. Note that a smaller portion of the tin is bent over at the top than at the bottom. After marking these lines, place the side between two pieces of iron or steel or long as the sides, and tighten in the vise with the line slightly above the vise jaws. Take another piece of iron and start the bend. Tap it with the hammer and keep bending until you have it at right angles. Repeat for the bottom bend.

When making the doors, cut them larger than the openings so that ¼" will overlap on each side of the opening. Cut out the window openings in the same manner as you made the cuts in the car sides. Cut out the entire opening as we will later put in the bars between the individual small window openings. Solder these inside the respective openings in the sides. All soldering should be done from the inside at the edge of the lap. Cut some very thin strips of tin for the window separations and solder in place. Scribe a line between the two sets of windows in the larger doors.

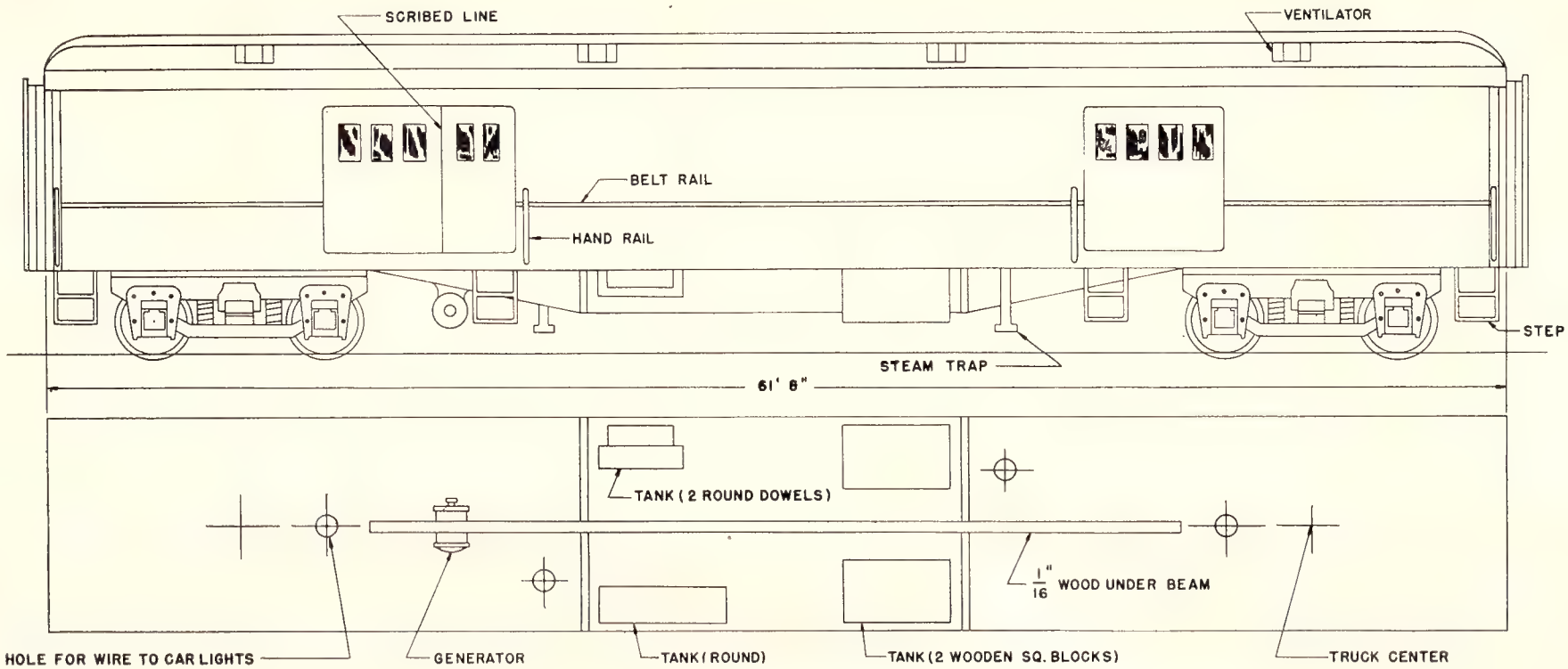
To fasten side to floor, drill five evenly spaced holes along the bottom bent-over edge of each side and countersink slightly. These holes are just big enough to take a small brad. Pin the sides to the floor with these brads. Two pieces of stiff wire or 1/16" square brass are then soldered inside the top angle of the two sides, holding them in position and spacing them.

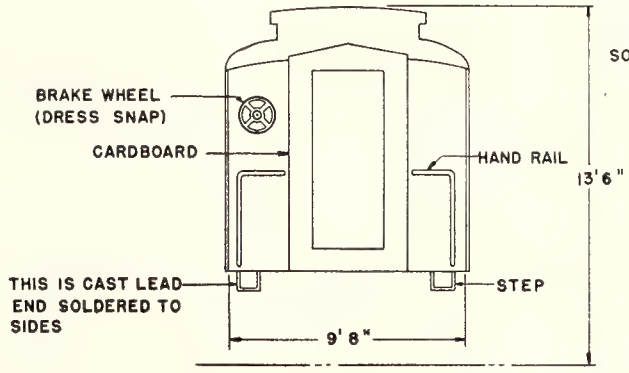
Purchased castings were used for the ends of my car, primarily for the excellent rivet detail and extra weight. These were fitted in place and soldered inside at the corners. Wooden ends can be used however, of any thickness for strength as there are no windows to interfere. Ends can also be bent from tin and soldered in place. Cut out the door openings in the ends. Doors are cut from cardboard, properly scribed, and cemented inside the openings. The door knobs are ordinary pins. The car should be very sturdy at this point, without any support from the roof which is made removable for access to the lights. Shape the roof from one piece of wood if you have the use of a power saw. If not, use two pieces of wood, one 3/16" thick for the top or clerestory and the other ¼" thick for the bottom half, mitered so that it fits down inside the tin sides. The bead on top is easily cut with a power saw or a thin narrow strip of wood can be cemented along the edge of each at the top. With the roof formed, sand it smooth and then hold it over steam to raise the wood fibres and again sand with fine paper. Cut out ventilators from wood to the shape as shown and cement to the roof. Cross cuts should be made in the roof bottom that fits inside the car to clear the two cross braces holding the sides together. If the roof is made to fit snugly, no screws will be necessary, however holes can be drilled through the floor and two screws fitted in from the bottom to hold the roof firmly in position. Cut and fit the roof ends to fit properly at the ends of the car.

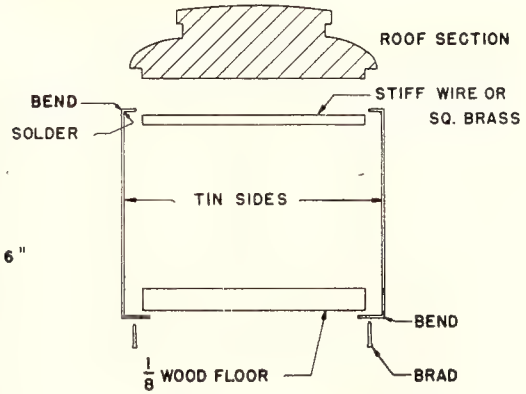
Build up dummy diaphragms from layers of cardboard and cement to the car end. Handrails and steps can now be bent to shape, soldering them into drilled holes if you use metal ends or cementing them into the wooden ends.

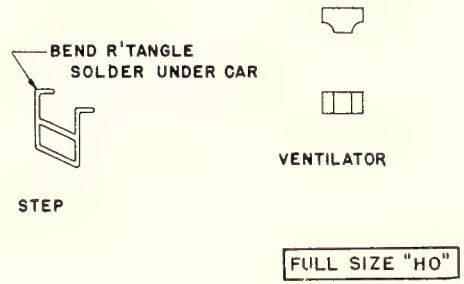
The belt rail presents a problem as it is hard to locate square brass or other metal of correct size. Here's an idea for making a clean neat job. Stretch a copper wire tightly between two nails on your bench and in position over the car side. Run a hot iron back and forth, making the solder flow into the V on each side of the round wire laying against the flat car side. The soft copper wire can be easily cut from the door openings and ends. Use a knife blade to remove any surplus solder. A flat file will also shape the wire, making it a little more square.

Center beam and cross braces are made of ⅛" wood and cemented to the car bottom. Next add the generator, round air tanks and the square battery boxes made from dowels and square pieces of wood. Use small nails for steam traps. Drill holes for the truck screws and holes for the wire leads for car lights and the car is ready for painting. Pullman green is the usual color unless you are going to freelance or model the Milwaukee or Pennsylvania. Trucks are the four wheel passenger type painted either Pullman green or black. When the paint is dry, apply road name decals and numbers and cement pieces of celluloid inside window openings. Mount the trucks (brass wheels) so the insulated wheels on one truck are opposite those of the other truck and solder a wire to each truck. The wires then come up inside the car and are soldered to the light bulb. If more than one bulb is used, they are connected in parallel, the combined capacity voltage being a little more than track voltage. Mount your favorite type coupler and we're all set to roll.

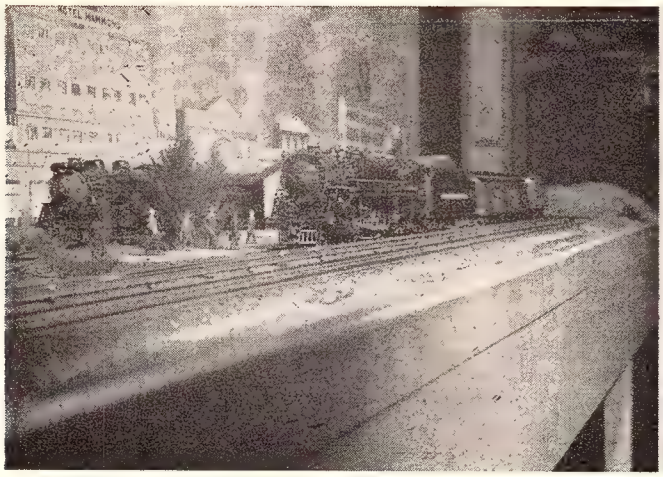








A SHORT BAGGAGE CAR



Along the right-of-way at the New Haven Road, one of Jack Schaff's precision made engines can be seen at the right coming through the tunnel. The engine was made entirely by hand.

"NEW HAVEN"

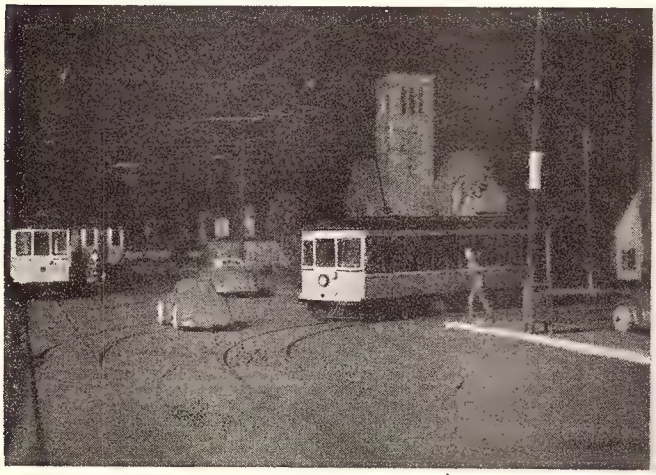
STARTING inconspicuously back in 1932 with only eight railroad-minded individuals, the New Haven Society of Model Engineers has grown in leaps and bounds, until today it represents one of better railroad clubs in the country. As membership grew, so did the layout, soon outgrowing the average home until they were forced to find suitable quarters at 223 State Street where the Connecticut Coast Line Railroad and The Coast Line Electric Railway came into being. Approximately 850 square feet of operating space was available, gigantic space at the time, but a mere drop in the bucket compared to their present space of 5,400 square feet. Despite this, they built up during the next four years one of the finest operating O-gauge model railroad and trolley systems ever built, totaling 660 feet in length, 47 switches, 16,000 ties, 35,000 spikes, 4 miles of electric wires and many other details too numerous to mention.

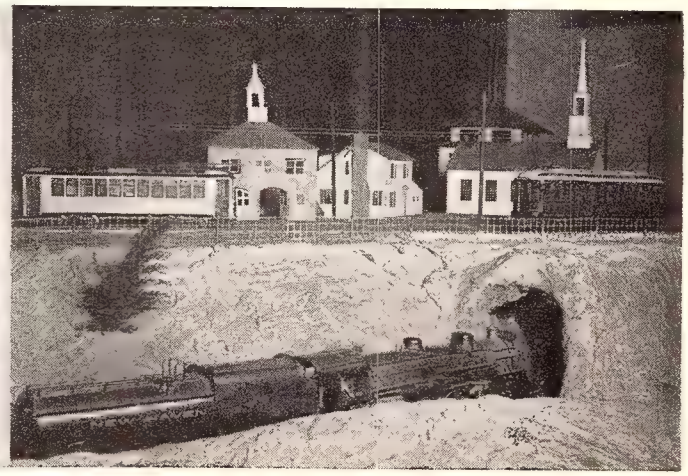
The club first opened to the public in 1938 with their first annual exhibition which was such a success that members were spurred on to others equally successful. One of the biggest events in the club's history was the dedication of their famous Scherzer Rolling Lift Bridge—the span over the Housatonic River at Devon on the N. Y., N. H. & H. Railroad—a replica in miniature built by Al Schellbach after three years of his hard labors.

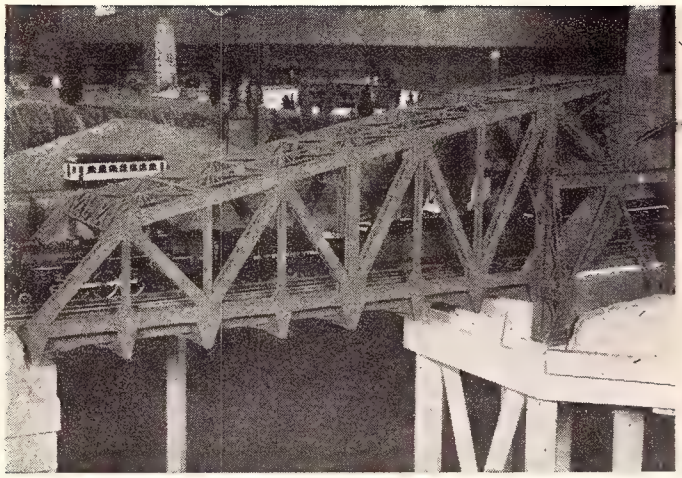
Typical of active club layouts, growing pains set in at New Haven and the club decided to move—"lock, stock and barrel" —to new and finer quarters located at State and Court Streets. Everything possible was salvaged down to thousands of tiny spikes, nails, etc., and the new set-up began. The boys worked like beavers, devoting every spare moment through the long months that followed. But their efforts brought rewards for today they can boast of one of the prize layouts in the country, putting on shows and exhibitions worthwhile for all attending. Up to this point, their road had been known as the "Coast Line System" but after a long chin fest was changed over to just plain "New Haven." Let the facts speak for themselves. The New Haven now has approximately 2,500 feet of track, 1,700 feet of special made brass third rail to carry the electric power plus 150 intricate switches. Approximately 55,000 ties have been cut from sugar pine and colored with Tintex dye, over 225,000 miniature spikes, each one handled separately and pushed into place with small nose pliers, thousands of feet of wire, 175 lbs. of tiny crushed stone for ballast and 150 lbs. of sand for trolley right of way ballast.

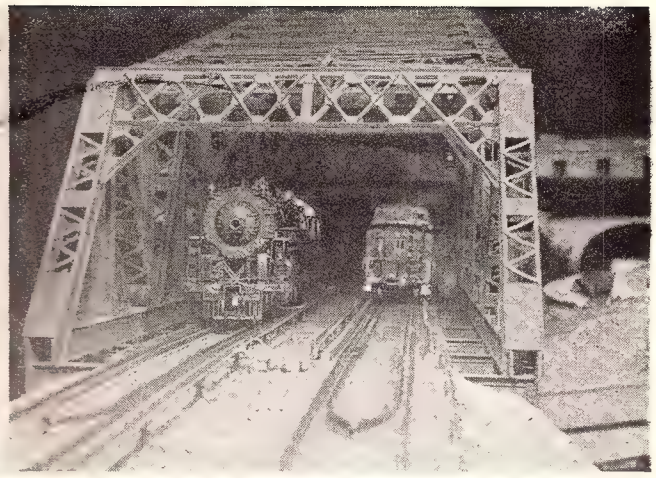
This year for the first time in their club history, they are giving the public the benefit of two exhibitions. The first was successfully held this past spring and now we can all look forward to their second show, November 1st, 2nd, 3rd, 8th, 9th and 10th, starting 7:00 P. M. on Friday, 2:00 P. M. Saturdays and Sundays and running until 10:00 P. M. Plenty of excitement is promised all who attend, particularly about 9:30 P. M. toward the close of each day's exhibition. An unscheduled thrill is usually featured by testing the pulling power of different engines with freights from 40 to 60 cars long. Plenty of competition from several new engines should give added interest in this event. Sunday, November 17th, will be open for all other club members to come in and operate to their heart's content. They are invited to bring any O gauge trolley or trains if they so desire.

. . . Can't you almost see yourself crossing the street in this trolley scene. At the right is another scene showing detail along the way.









This is the famous Scherzer Rolling Lift Bridge, an exact replica of the span over the Housatonic River at Devon on the N. Y., N. H. & H. R. R. This model was built by Al Schellbach after three years of concentrated work.

RAILROAD

Here's what you can expect if you attend the show. They have a point-to-point system with main terminals at "New Haven" and "Bridgeport," almost all double track with the exception of one stretch near the Bridgeport terminal which in time will also be double track. Several cross-overs permit reversal of direction of travel. Construction photos show several club members at work rushing their new through station to completion for the show. This is located in the geographical center of the layout, designed by Roy Watrous who himself is working feverishly to beat the deadline. The station will have four tracks for passenger trains, platforms will be of elevated type on a level with the car floors. Freights will by-pass the terminal in the rear, the by-pass track also being used for express passengers.

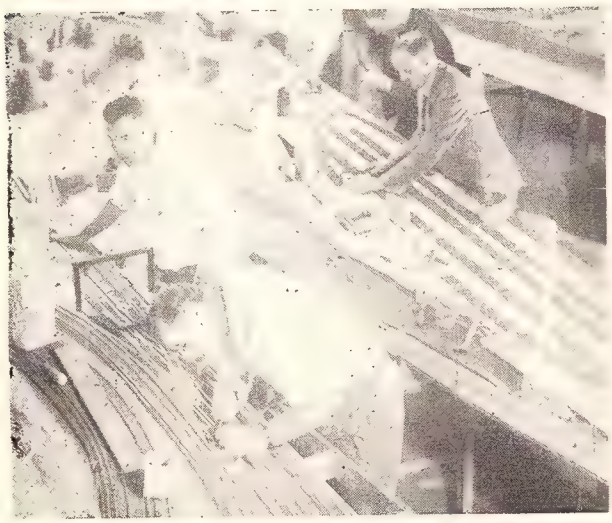
Ben Hasselman and his son Dick are busy, rigging up another motor generator outfit to use by show time. One power supply will be used for their extensive trolley system and one for the railroad. Several members, including Fred Viedeman, Jack Schaff, Ray Legget and Bill Currano expect to have new home-made engines ready. Incidentally, Bill Currano's engine seems to be the joke of the club, being built from N. H. 1400 plans, which is a 4-6-4 streamline job. He likes a 4-8-4 but also likes the 1400. Let them laugh, Bill, it's all yours (if it runs)! Ray Legget is keeping busy at home making the station for the new terminal; work slowed up for awhile due to lack of lumber.

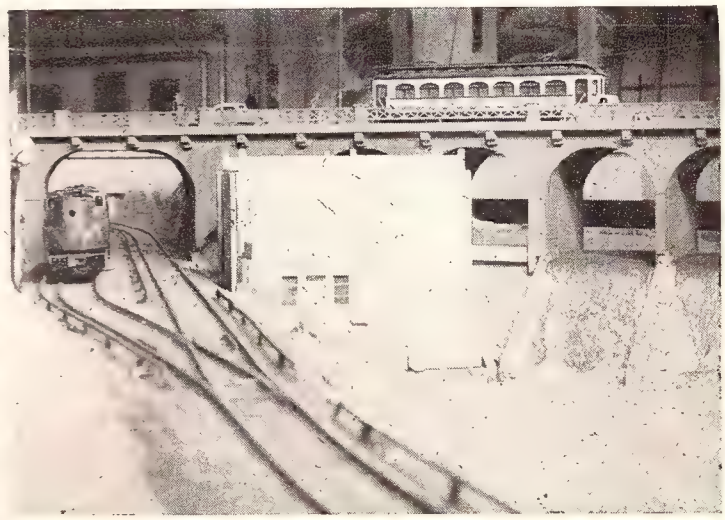
During the show, the public is given a very good idea in miniature of what railroading is like. New Haven boasts of perhaps thirty model locomotives as well as 200 freight cars, 50 passenger cars, as well as many reefers, work cars, etc. Club members work the yards, making and breaking up trains using switch locos and attempt to follow through real procedure. For example, all passenger trains are brought directly into the New Haven terminal. Passengers are permitted to leave and after a short pause the train is backed out and put on the siding. The locomotive is then taken over to the turntable at the roundhouse and reversed, end for end. During this time, a sturdy switcher juggles the cars around, getting the observation car last, then the pullmans and passenger cars with a baggage car coupled directly in front. With the train made up, the locomotive is then backed down the track in order to be headed in the right direction. After coupling to the baggage car, the entire train is made up and ready to back down into the station for taking on more passengers and starting its run. Procedure is roughly the same in New Haven freight yards.

At the Bridgeport yards, we have a different story with a reversing loop where trains can be shunted off in order to turn them around. This is not done until the train has first been brought into the station to discharge its passengers.

The trolley boys have worked wonders at New Haven, having the best trolley system in the country, bar none. Realism is their keynote even to speeding and not giving the pedestrian a break! Their layout has some wicked curves and grades which give the public many a thrill. Even the railroad boys at New Haven can't seem to understand how they can make some of their grades and hairpin curves at such breakneck speed. They manage to keep it well in hand, however, until "Pop" Watrous isn't looking and then the fireworks begin! (Yes, they do have crashes—but why not more often?) Pride and joy of the trolley system is their overhead wire. People can actually stoop down and look under them, getting the impression they are looking down a street (see photo). Real action every minute!

Photos by Bill Currano





STATIONARY STEAM ENGINE

part four

By LEWIS AUSTIN

YOUR model steam engine is shaping up rapidly, with only the connecting rods, valve connecting rods, crossheads and bolts left to be made. Reference should be made back to the July issue which included the assembly drawing of the engine. The connecting rods for the pistons are cut out with the milling attachment on the lathe. Start by squaring up the stock to the dimensions given. Note that the stock will have to be 3/8" thick to enable you to make the yoke at the top. The connecting rods are made in two pieces so they can be mounted on the crankshaft. Most of the cut-outs on the rods can be roughed out with a hacksaw to make the milling easier. The fluting on the rods can be done with the milling attachment, but can be omitted if you prefer. Drill and ream the 1/8" hole through the yoke before cutting the 1/4" slot through. Once the rods are milled to shape, make the bottom pieces out of 1/4" thick stock and also mill to shape.

Clamp the bottom pieces to the connecting rods and drill and tap the 4-40 holes shown on the drawing. The parts can now be fastened together with 4-40 allen head cap screws and a 7/16" hole drilled through the joint of the two pieces. Make four bronze bushings 7/16" in diameter by 5/16" long, and drill a 1/4" hole through each bushing. Silver solder in place in like manner that you mounted the bushings on the engine bed. After soldering, mill or file off the top halves of the bushings and screw the parts of the connecting rods together again. The 1/4" hole can now be drilled and reamed to 5/16". The connecting rods are now completed except for the radii on the yokes which will be filed later.

The valve connecting rods are made from 1/4" thick stock. Square up to proper length and width; drill and ream a 1/8" hole in one end. The 7/8" hole in the other end can best be bored on the lathe by mounting on the face plate. After boring the holes, make two 7/8" diameter by 1/4" thick bronze discs. These are silver soldered in the 7/8" bores. The pieces are then remounted on the face plate and 3/4" holes bored into the bronze discs. Make these holes a good slide fit for the eccentrics. The two 4-40 set screw holes, one in each side of the rod, can now be drilled and tapped. It is much easier to put all the holes in the rods now before they are cut to shape.

The hardened buttons shown on the drawing are used to file the 1" and 3/8" diameters at the ends of the rods. These buttons are turned out of drill rod to the dimensions given and then hardened by heating up the pieces with a blow-torch or gas flame until they are a bright glowing red and cooling them quickly in water. The buttons are then fitted into the holes in the rod ends and the whole thing clamped in a bench vise. The radii can then be filed nicely, for once the file hits the hardened button it will not file any deeper. With the buttons removed, the rods will be nicely rounded at each end. Do not press too hard on the file when near the edge of the button, for the file will be dulled if rubbed across the button. File the rounded end on the piston connecting rods in similar manner. As shown on the cross-section, the valve connecting rods are filed to an oval shape. Finish up the rods with emery cloth and a buffing wheel.

Mill the crossheads to dimensions given from 5/16" thick bronze. Make the 3/16" wide slots a good sliding fit on the crosshead slides on the supports. Drill and tap the hole for mounting the piston rod, also drill and ream the 1/8" hole for fastening crossheads to connecting rods. Radius shown on crosshead can be filed using the 3/8" diameter hardened buttons.

The bolts for fastening the rods to the crossheads are turned on the lathe out of hex stock, preferably steel. Use care to get the 1/8" diameter on the bolts a good fit in the 1/8" holes reamed in the connecting rods. The ends of the bolts are threaded with a 4-40 die. Nuts are easily drilled and tapped on the lathe and then cut off.

Sheathing for the cylinder block is made from 1/64" thick sheet brass. Cut the stock to size and drill the holes. Note that the two 5/16" holes are only in the sheathing on one side of the cylinder block. These holes provide exhaust openings through the sheathing. Bend the sheathing to shape and fit to the cylinder block. You may have to file a radius on each end of the sheathing to clear the nuts on the intake pipe. All parts of the model are now completed and ready for assembly.

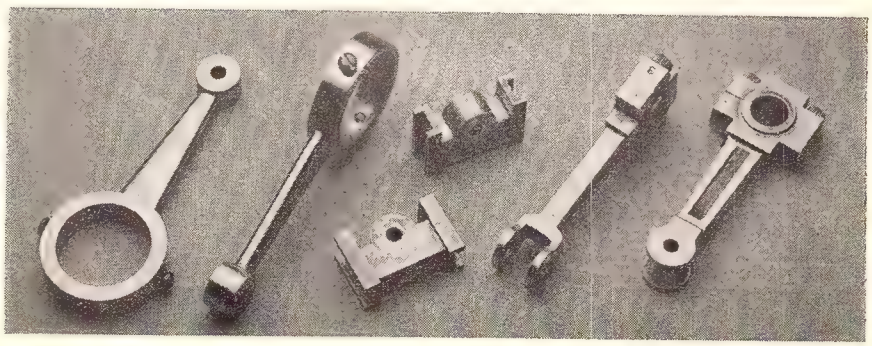
Mount the crankshaft on the engine bed; screw on the bearings good and tight, making certain the crankshaft turns freely. During assembly, try each part separately to see that it turns, otherwise your engine will be bound up when completely assembled. The eccentrics and flywheel can be mounted on the crankshaft next, followed by the connecting rods on the crankshaft throws. Fasten the four supports to the engine bed and check the distance between the crosshead slides. This should be exactly 3/4" and can be checked with a piece of 3/4" stock.

Your engine should now be mounted on two pieces of hardwood so that it will stand up on your work bench. The hardwood blocks must have clearance holes drilled into them for the allen cap screws that hold the supports in place. Sandpaper the blocks until smooth and give them about three coats of good spar varnish. When the engine is tested out with steam, the blocks may become wet and the varnish will protect them. Fasten the engine to the blocks with a wood screw in each corner of the engine bed.

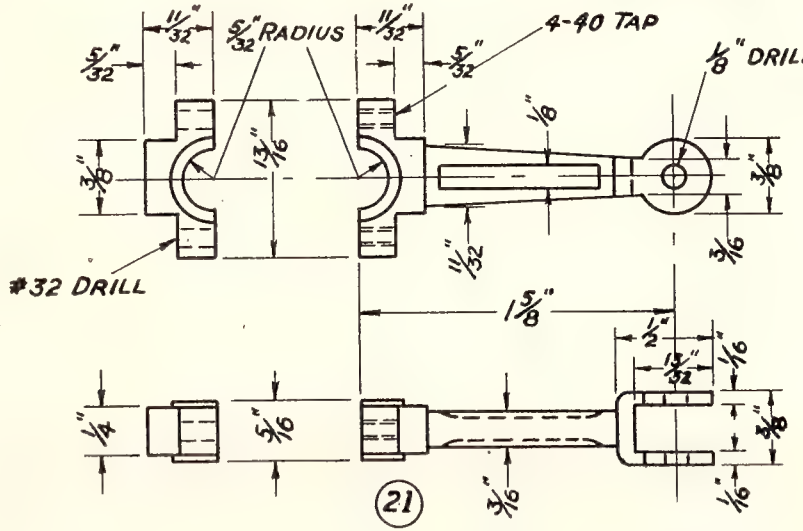
The four stud bolts are screwed into the tops of the supports. The cylinder block is then assembled with the pistons and piston rods in place and the cylinder heads screwed on tight. It is not necessary to have the steam chests assembled on the ends of the cylinder block at this time. In fact, it would be better to leave them off until you are ready to set the slide valves. Screw the crossheads in place on the ends of the piston rods and slide the whole cylinder block assembly down over the stud bolts. Check the crossheads to see that they slide up and down easily. If not, file the slots in the crossheads to ease them up a bit. When everything is working freely, fasten the cylinder block to the supports. The block is held in place with four 4-40 nuts on the ends of the stud bolts. Fasten the crossheads to the connecting rods with the 4-40 hex bolts that you made. Turn over the crankshaft to see that everything is working freely. Put oil on all moving parts to ease them.

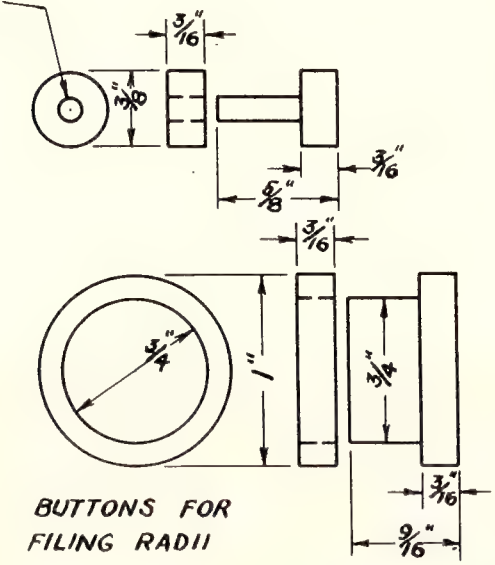
Looking at the end view of the assembled engine (July MC) you will note that the high point on the eccentric is set 90° ahead of the crankshaft throw on its respective end. Set your eccentrics in this position and fasten them firmly in place with the set screws. The steam chests are then screwed on the intake pipe and screwed in place on the ends of the cylinder block. Leave the steam chest covers off. These will be put on after the slide valves are set. Mount the valve rod, collar and slide valve in the steam chest. The valve connecting rods are now slipped over the eccentrics and the set screws in

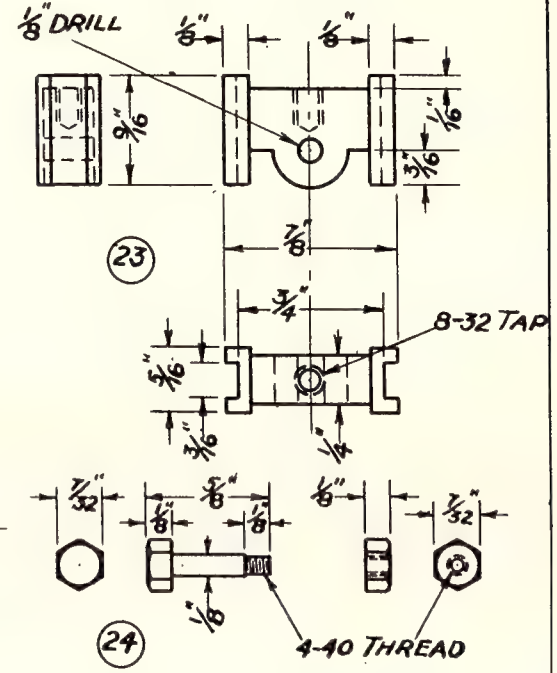
(Continued on page 57)

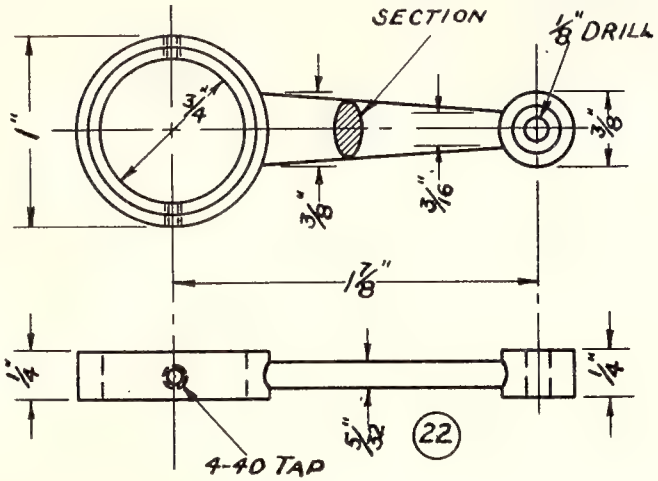


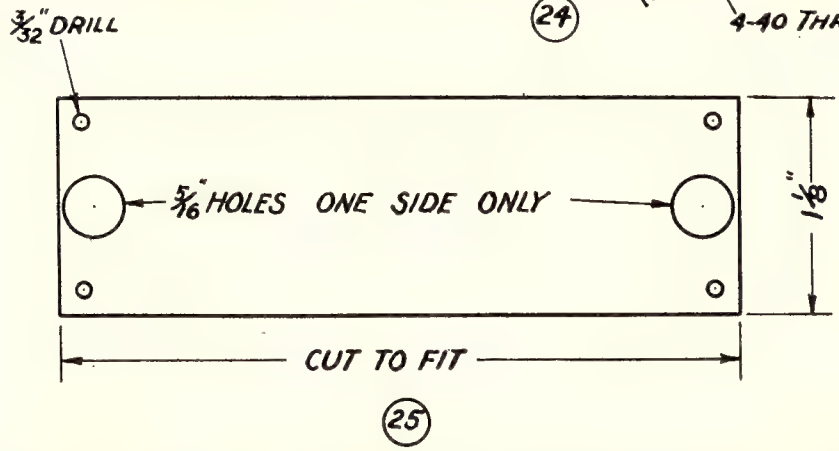
STEAM ENGINE DETAIL







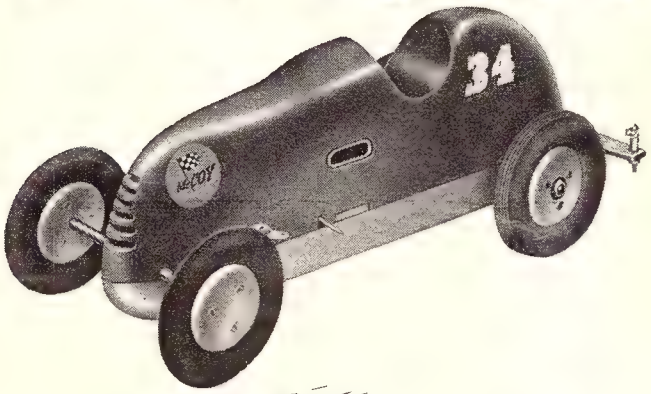




L. AUSTIN

TWO GREAT NEW CARS!

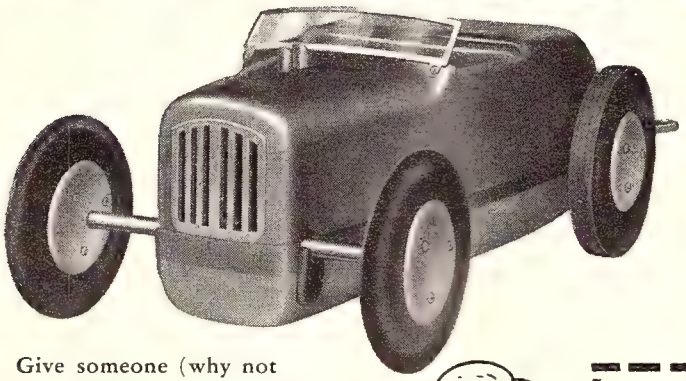
DURO-MATIC Invader



A racing prototype designed by *Dick McCoy* and *Charlie Lamb* for appearance and speed that gets the checkered flag. Factory assembled with fuel tank ready for easy engine installation. $42.50

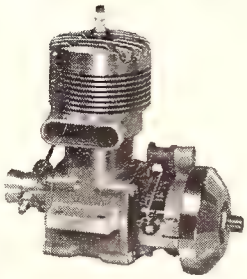
SPEED FACTS: McCoy powered INVADER prototype cars finished *1st* (103.92 m.p.h.), *2nd* (102.62 m.p.h.) and *3rd* (102.04) in the June 23 International Races at Ontario, California.

DURO-MATIC Hot Rod

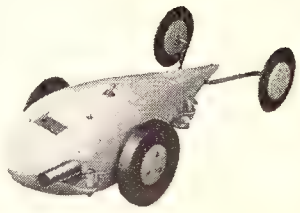


A facsimile prototype of the popular Muroc Dry Lake AV-8 roadster class. Spur gear drive with easy installation for your engine. Factory assembled with fuel tank. $42.50

Give someone (why not yourself?) a gift of *speed* this Xmas... Duro-Matic racing products make ideal gifts for every model fan. See your dealer now!



DURO-MATIC RED HEAD ENGINE... World's fastest engine, for racing cars, planes and boats $35



McCOY RACING CAR... Holder of the world's speed record (116.73 m.p.h.) established at San Francisco, July 7, 1946 . $42.50

DURO-MATIC
PRODUCTS COMPANY
HOLLYWOOD 38, CALIFORNIA

MINIATURE RACING CARS

Photo by Messner

Left to right—Fred Luning, Jack Mayhew and Stan Prussian holding the Harold V. Loose Memorial Award won by Luning who established a new speed record for Spur Gear at 118.73 MPH with a McCoy car powered with a Hornet Engine.

NEW NATIONAL RECORD SET AT HAROLD V. LOOSE MEMORIAL RACE

THE running of the 5th Annual Harold V. Loose Memorial Race proved to be quite an eventful occasion, highlighted with the establishment of a new national speed record in Spur Gear at 118.73 mph set by Fred Luning of the Long Island club. This feature race had its inception back in 1941, paying tribute to Mr. Loose, who was formerly editor of the Model Craftsman magazine, and who did so much to start the hobby of model race cars. It was through his earnest efforts that we have some of today's standards in race car design. In the past six years, and the 5th running of this race, it has become the outstanding Model Race Car classic in the East. It is very gratifying to note the advancement in speeds during these six years, starting from 83 mph to the present speed of 118.73 mph.

This year's race was packed full of thrills from the first heat right up to the finish. In the very first heat Johnny Jaciow of Ludlow, Massachusetts, turned 117.04 mph. Just behind him was Fred Luning with 115.83 followed by Jack Thorp at 112.92. In the second heat, Jaciow couldn't better his position, turning 116.58, with Fred falling back to 114.21 and Thorp dropping to 111.39. But now for the final and last heat! Johnny knocks out 117.04 mph and Thorp 111.39. So far it looks like Jaciow's race, but we still have to hear from Luning, who sets his car out and proceeds to run on the ribbon. Wow, what a run! The crowd goes nuts at 118.73 mph for a new national speed record in Spur Gear, as well as the winner of the 5th Annual Harold V. Loose Memorial Race.

While all this has been going on in the Spur Gear Class, the Proto boys have not been sleeping, having a few upsets of their own. Wilbur Martine, who has been showing the Proto boys around all summer, is being uncrowned by his runner-up of the season—Dick Deus, Jr., who went to town to the tune of 104.17 mph, the best Wilbur could do is 102.07. Third place went to B. Janovics with 95.54. This race between Deus and Martine has proved very interesting to watch. Deus has been working hard all summer, and each time he would improve, so would Martine, and there he was in second spot again. But at this race, he really uncorked it and left the post, coming in first spot with 2 mph to spare.

For the very first time, no streamliners were run, but in its place a class was opened for manufactured protos. This is done primarily to attract more entries for those boys owning commercial cars and also to spread the competition just a little bit more even, which has been done through the use of this Class. At the present time, this Class will be continued in place of the streamliner which appears to be losing interest constantly. Competition was very close in this class with Kurt Possler taking first spot at 92.59, with T. Ciovanett at 92.49 and H. Frank at 92.31 mph. Judging by these results, you can see that there was very little difference

(*Continued on page 60*)

Photo by Messner

Close-up of Harold V. Loose Memorial Award won by Fred Luning, of the Long Island Club.

Photo by Messner

Winners of the Harold V. Loose Memorial Race held Sept. 1st at East Meadow, L. I. Front row, left—H. Frank, Frank Luning, Phil Carpenter, Bob Smith, Fred Luning, Bob Whiteside, Giovanett. Second row, left—W. Conners, R. Deus, Jr., E. Rogers, R. Van Houten. Standing, left—W. Martine, F. Valeo, J. Thorp, F. Pogachnik, K. Possler, B. Janovics, Jr., W. Remez, J. Jaciow.

Photo by Don Hook

Winners at Waukegan, Ill., Sept. 1st. Left—John Crossan, of Rock Island, Ill., winner in Spur Gear with 118.27 MPH. Right—Dale Martell, of Detroit, who established new Proto record with 113.21 MPH.

RECORDS BROKEN AGAIN AT WAUKEGAN!

By JOHN MAYFIELD

FANS and contestants alike cheered as the two National records were broken again at Waukegan, Ill., Sept. 1st. The weather was perfect, and there were 30 protos and 28 spur gears entered in what was to be the fastest race in the Midwest. (AMRCA Sanction 4607). The Proto record was the first to fall and when Dale Martell's sleek #10 (the fourth car to run) was burning up the track, all the boys crowded up to watch it because a Proto had never sounded like that before. When the timer caught the last lap, everyone rushed over to the watch, not waiting for announcement to come over the p.a. Wow!—¼ mile in 7.95 for a sweet 113.21 MPH—another record set at Waukegan!

John Mayfield of Waukegan held second place with 107.78 MPH until the last heat when Glen Fairabend of Detroit coaxed a little more out of his "Green Hornet", turning the quarter in 8:32 for 108.17 MPH. C. A. Kean of Brownsburg, Ind., and H. Harrison were tied for fourth, Kean losing in the run-off to take fifth. John Crossan of Rock Island clocked 105.01 for sixth, and little did we (or he) know he had something up his sleeve for the Spur Gear division. Joe Gaebler ran his new Pacemaker car, hornet powered, 104.77 for seventh spot. Remembering a meet at Waukegan in Oct. 1945 (when all the boys were wearing overcoats) he asked Mayfield if by any chance the center post was the North Pole. He said he hoped this was as far north as anyone could get.

The first spur job on the track was run by Frank Skerbinc of Detroit. It was clocked at 111.11 MPH. Frank is a newcomer and will bear watching. After this car ran, the boys knew the spur gear record would fall when a certain car got on the cable. It finally came, the twelfth car to run, John Crossan of Rock Island. Round and round, faster and faster, until the timer caught the sixth lap, 7.61—118.27 MPH—**that car surely was flying!** All the boys came up to compare watches—another National record! (*But only temporarily, for at the same time out in the East at the Harold Loose Memorial Race, Fred Luning nosed out a few more seconds of speed to set the present National Record of 118.73 MPH!*) Just two weeks before this race, John's car broke a bridle and hit the cement crashwall at Lafayette, Ind., track, demolishing the car. It must be some kind of a record to rebuild a car and get this speed in two short weeks.

Glenn Matthews of Rockford and George Coffield of Rock Island tied for second with 115.68 MPH. H. Wallace of Indianapolis, one of the old regulars, bagged fourth at 114.50 MPH. Harry Lafflame of Kankakee (Santa Claus of Miniature Racing) surprised himself with 112.07 for fifth spot. After not doing so good all season, Harry took it upon himself to buy land and build a track last year, and puts on swell meets and gives fine trophies. How's that for doing your part to make this sport popular? Skerbinc of Detroit kept sixth place with 111.52, and another Detroiter, L. Beri, hit 110.56 MPH for seventh. Jim Ogden's boys always take home the lion's share of the trophies when they visit Waukegan. We like to see this because these boys travel about 640 miles to make the round trip.

Joe Olender and Red Suddeth were trying out several of the new Pacemakers which Joe designed. Herb Gwynn of Chicago rail track fame paid us a visit and spent the afternoon. Herb thinks he'll get a cable car too. We always enjoy seeing Herb—a swell fellow.

Only one trophy was won by a Waukegan member, this going to Mayfield for third in proto. Marsh Lewis and Warren Borden, both of the Waukegan club, didn't get their usual good times due to recent crack-ups.

At this time, we want to extend an invitation to the boys on the East and West Coast to try and make one of our meets next year.

SPUR GEAR

	MPH
J. Crossan: V-Car, Hornet	118.27
G. Matthews: V-Car, Hornet	115.68
G. Coffield: V-Car, Hornet	115.68
L. Wallace: V-Car, Hornet	114.50
H. Lafflame: McCoy, Hornet	112.07
F. Skerbinc: McCoy, Hornet	111.52
L. Beri: McCoy, Hornet	110.56
M. Knell: McCoy, Hornet	109.62
K. Smith: V-Car, Hornet	109.22
E. Stump: V-Car, Hornet	107.78
J. Kuha: McCoy, Hornet	107.27
M. Davis: McCoy, Hornet	106.63

PROTO

Dale Martell: Own car, Hornet	113.21
G. Fairabend: Own car, Hornet	108.17
J. Mayfield: Own car, Hornet	107.78
C. Kean: Pacemaker, Hornet	105.14
H. Harrison: Pacemaker, Hornet	105.14
J. Crossan: Own car, Hornet	105.01
J. Gaebler: Pacemaker, Hornet	104.77
E. Winchell: Own car, Hornet	104.16
F. Matthews: Hook, Hornet	103.44
M. Lewis: Own car, Hornet	102.97
J. Ogden: Own car, Hornet	100.89
M. Knell: Own car, Hornet	100.33

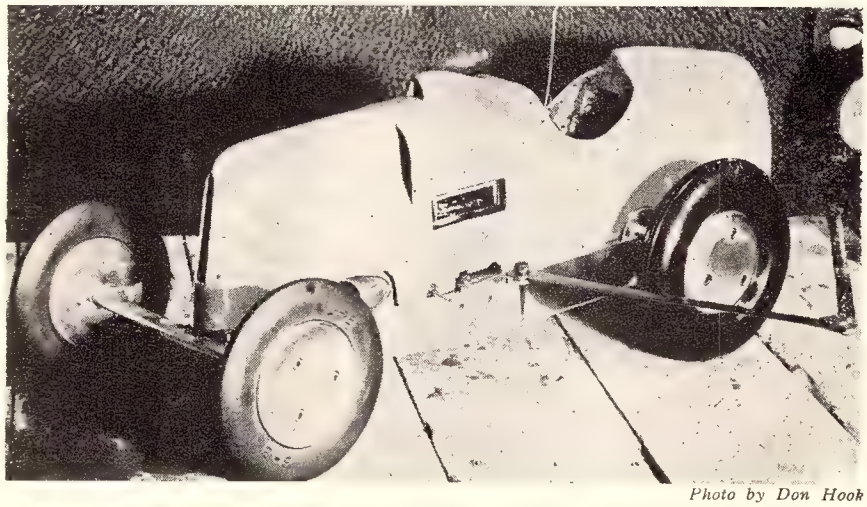


Photo by Don Hook

Proto car owned by Dale Martell, of Detroit, who established new speed record of 113.21 MPH at Waukegan, Ill., Sept. 2nd. Car is his own design, powered with a Hornet engine.

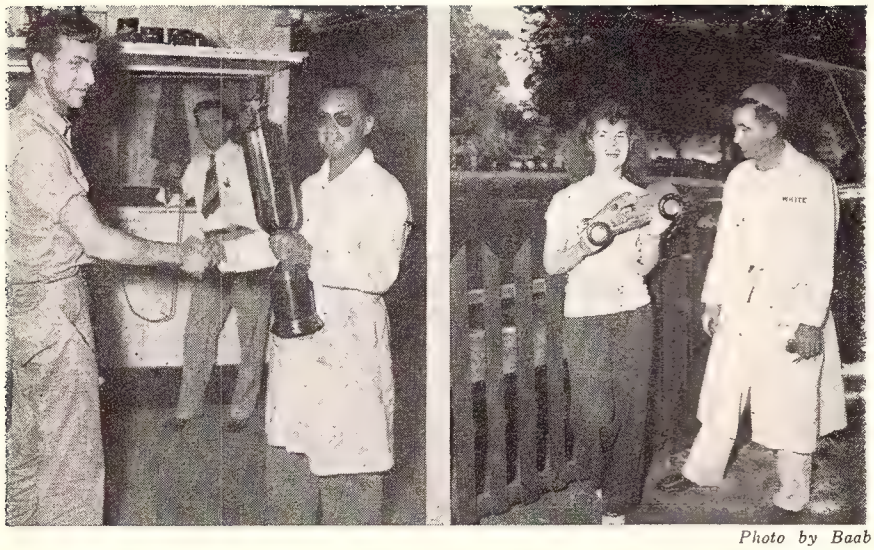


Photo by Baab

Left photo—Ronald Smith, left, presents Percy Matthews trophy to Jim Gilmore, Sr., who won with a total of 1500 points. Ray Hook can be seen in the rear. Right photo—Frances Miller picks Wilmer White's car as best appearing job.

JIM GILMORE WINS PERCY MATTHEWS MEMORIAL TROPHY

By LLOYD BAAB

THE Third Percy Matthews Memorial Race held at San Leandro, California, on Sept. 1st & 2nd, drew a large entry of 70 cars and some very fast times were turned in despite no new records being made. Jim Gilmore from Fresno was the winner of the Percy Matthews trophy awarded to the model race car driver who amassed the highest points during the year of racing. Jim totaled 1500 points. The San Leandro Club has made remarkable progress during the year under the guidance of Ronald Smith, the Club president.

A new seven foot wire fence was installed for this race and from the rumors that are going around the club will have a new surface on their track before the spring. A new group of faces in the pits was noticeable due to the cars available on the market and also to the new class of car known as the Road Runner Hot Rod and the Widget. These cars are taking the fancy of the boys and there will be quite a few at the races from now on.

Two new world records were set in this class as R. A. Nowell and Don Sharver with his home-made Hot Rod tied for first place and both now hold the record jointly. Wilmer White gave the Hot Rod boys a tussle with his Widget.

Dick McCoy and Charlie Lamb entered their McCoy-Lamb Proto car in the Non Competitive Class and turned in a time of 102.85 MPH. This car is going to be a very fast proto and will soon be on the market. Al Papina gave an exhibition run with his Papina proto that was dolled up like a large racing Midget Car. This would have taken a beauty prize if one had been offered. The women folks, Mrs. Stackhouse, Mrs. Hook and Mrs. Perrson, furnished refreshments to the contestants during the two days of the meet. A banquet was held at Vern Gardner's motorcycle sales room. Frances Miller chose Wilmer White's car as the best appearing early in the last day of racing. "Junk" Anderson was around picking up what junk he could and also disposing of a lot of it. He was also firing the rear ends of various pranksters with a lighted newspaper and particularly Roy Hook who was talking over the P. A. system at the time. When this happened, the most weird noises came out over the P. A. system that the poor spectators thought someone was being killed! The appearance of Willie Lessera of Sacramento was quite a pleasant surprise to the boys, as he was reported missing in Africa during the war. He reported being taken prisoner in Austria and we welcome Willie back home.

SPUR GEAR	MPH
Charles Lamb	111.80
Wilmer White	108.36
Roy Torrey	108.17
T. S. Aleshire	106.50
T. Lessley, Jr.	106.38
J. Piexotto	105.01
"Junk" Anderson	103.56
E. W. Stewart	102.97
D. Keshishian	102.91
H. Stackhouse	102.68
Dick McCoy (non competitive)	114.06

PROTO CLASS	
Wilmer White	105.50
Bill Charles	99.11
Ted Francis	99.00
Ronald Smith	96.67
A. Anderson	96.35
C. Horn	96.05
F. Jenkins	95.84
J. Perrson	95.64
J. Gilmore, Jr.	95.03
Clyde Wilson	94.14
Don Sharver	94.33
McCoy & Lamb (non-competitive)	102.85

STREAMLINE	
J. Gilmore, Sr.	102.62
H. Stone	98.14
Cliff Fox	94.63

HOT ROD OR ROADSTER	
R. A. Nowell	82.04
Don Sharver	82.04
Wilmer White	78.94
L. Miller	77.58
A. Miller, Jr.	77.51
Frances Miller	71.37

RACE CAR CLUBS TAKE NOTICE!

MODEL CRAFTSMAN is now in the process of preparing a Race Car Manual. Among other features we are listing a Club Directory covering every club in the country now on our records. Any Club who has not contacted this office with full particulars is urged to do so immediately. Address communications to Model Race Car Editor, Model Craftsman, Ramsey, N. J.

Photo by Baab

Group of racers competing at the Third Percy Matthews Memorial Race, held at San Leandro, Calif.

Photo by J. Thompson

Action at the starting roller on the new Chicago-Midwest Rail track.

WANT A RAIL TRACK?

By JAMES T. THOMPSON

IF you have ten good substantial members who have a few dollars to loan, plus a little backbone and determination, "it is possible to have a rail track for your club"! We say "loan" and we mean just that, for the money can come back faster than you think. There is not much fun in waiting for "angels" who seldom appear with financial support, so here is how it can be done on a strictly reliable business basis, asking favors from no one, and it is not an idle pipe dream, but a plan which has already shown tremendous success.

The Chicago Club during 1945 found themselves without a race track, which caused an unfortunate situation. Some of the members were red hot racing men who wanted a track, others were only lukewarm, and getting colder by the week. There was a little money in the treasury, probably enough to cause a good scrap over who gets it, should they disband, so what to do.

Then the "red hots" went into action with a goal ahead—a new constitution was drawn up and adopted, classifying the members into two classes; namely, Class A and Class B. Class A members were to take responsibility of management of the club, building and operating the track, and in general do the work. Class B members were to have no part in management, do no work, or have any other responsibilities but pay a fee to race on the track.

Qualification for becoming an A member right away was the loan of one hundred dollars cash to the club, payable if, and when, the returns were gathered from operation of the new track. A dead line of January 1, 1946, was set for dropping the hundred in the kitty and becoming Class A.

Ten boys dropped the hundred and the club was in business with one thousand bucks hard cash, plus what was already in the treasury. Since the deadline did not apply to boys in the service, one of these came back later and dropped his hundred, making eleven hundred with eleven Class A members, plus quite a number of B boys who could not afford the hundred but still wanted to help. The constitution specified that B members putting in twelve months of good hard work along with the A boys could apply for A membership at the end of the twelve month period (no loan required).

The club now strongly organized for battle and the battle started. Obstacles were mowed down as they marched forward. Four thousand feet of lumber was purchased for four hundred dollars, including a ten dollar new hat for the lumber dealer who helped locate the material. The processing cost another hundred more. Five hundred fifty pounds of steel was purchased for one hundred fifty-four dollars, another one hundred thirty spent for shearing and breaking into rails. The other two hundred covered the fencing, used railroad ties and gravel for foundation, bolts, screws, washers, paint and other incidentals.

There were the makings of the track. Now where to put it? People complained of noise from these big husky engines of a little more than one-half cubic inch, so searches were directed to the open country where the noise could be dissipated before damaging sensitive ear drums. Of course, this meant getting off the beaten paths into a remote spot where interested spectators would have plenty of trouble in finding the track, but races must be run, spectators or no.

A two-acre plot was located in a farming district three miles from the nearest town, and on a paved but sparsely traveled road. The following deal was made with the owners. The ground was formally leased for five years, with a five-year option, with the owner getting a flat twenty-five percent of the net admissions (less federal tax) with the club guaranteeing this to cover the taxes of the property.

A few dollars for fee and some cigars secured the permit for building and operating a race track from the county zoning board, so the road forward was open. Details of construction have already been told.

With a little hard work, the track was made ready for holding the three-day Nationals, which netted the club cash as follows: Gate admissions at fifty cents per person, twenty cents for youngsters, after tax and twenty-five percent for the landlord were deducted, amounted to $128.63. Entry fees at $2.00 per car amounting to $90.00 totaling $218.63 for the three days operation. Pretty good we thought, but was this just a flash in the pan, probably because it was the Nationals?

August came and went; so did the spectators, finding the track somehow. We did no advertising. The newspapers did give us a little publicity, but people came who did not see the paper. Even on such a sparsely traveled road, there seems to be many who just happen to see

(*Continued on page 61*)

Photo by J. Thompson

"Here she comes!" Clyde Rohrer's car coming round the bend on the Chicago-Midwest Speedway.

PRESENT SPEED RECORDS

THIS is your standing box score. Each month we will publish these results for your benefit until newly established records replace them. These are the present existing records as reported officially to this office, showing the highest speeds established on both cable and rail tracks, type car and engine used, together with location and date of established record:

1/16th MILE CABLE TRACK

SPUR GEAR: Set by Dick McCoy at San Francisco, July 7th—116.73 MPH
(McCoy Car with McCoy Engine)

PROTO: Set by Howard Lee at San Francisco, July 7th—108.95 MPH
(Own Design Car with Hornet Engine)

1/24th MILE CABLE TRACK

SPUR GEAR: Set by Fred Luning at East Meadow, L. I., on Sept. 1st—118.73 MPH
(McCoy Car with Hornet Engine)

PROTO: Set by Dale Martell at Waukegan, Ill., Sept. 1st—113.21 MPH
(Own Design Car with Hornet Engine)

1/16th MILE RAIL TRACK

STREAMLINE: Set by W. Weller at Chicago, Aug. 25th—79.30 MPH
(Hornet Engine used)

PROTO: Set by Clyde Rohrer at Chicago, July 18th—76.40 MPH
(Hornet Engine used)

KANSAS CITY STILL WITHOUT TRACK

THE boys of the "Heart of America" Miniature Race Car Association of Kansas City recently had the privilege of visiting Salina, Kansas, to participate in the AMRCA Regional Meet held on Sept. 2nd. They left Kansas City to arrive at Salina, 200 miles distant, finding the weather quite cool and dismal. Entrance fees were arranged and new applications in AMRCA were made by most of their members present. By 12:30 noon, they were ready to participate in the meet against the Salina team. Before any cars had made their runs for the day, old man rain took over and gave the track a good soaking, lasting until 3:30 P.M. At each slacking interval of the rain, an effort was made to dry the concrete ribbon with brooms, brushes, squeegees, etc. Finally, the track was dry enough for the races to continue, but time would not permit continuance of the races as originally planned. The race was called off and the rest of the time devoted to trial runs on the smooth, level Salina track.

Kansas City is still without suitable location for a track, still operating on the local fire department training grounds which are large enough but very rough. Because of this, it was a real pleasure to the boys to race on such a track as found at Salina, suitable for high speeds. The fastest time on their Kansas City track to date has been 88.66 MPH with a McCoy car and McCoy engine. This very same car belonging to W. F. Kaiser attained the top speed of the day at Salina, knocking out 104.04 MPH for the ¼ mile. This was quite a surprise after their previous speeds attained at Kansas City. Other speeds for the day ranged from 102 odd miles with spur gears down to roughly 77 MPH for proto cars. Top proto speed was approximately 90 MPH.

Since the regional meet had been postponed, the Kansas City boys planned to return to Salina on Sept. 15th to rerun the the meet. Results will follow next issue.

We certainly take our hats off to the Salina Club, for the boys from Kansas City will long remember their reception. The wives of the Salina boys were present, and during the downpour of rain, served hot coffee and sandwiches to the entire gang. The Kansas City Club is loud in their praises for Salina, finding among them more cooperation and interest for racing than they had dared anticipate.

EUSTIS CLUB GROWING

THE boys from Eustis, Florida, have been showing remarkable progress of late, with increased membership as well as cars. Several new conventionals have appeared at the track in the past few weeks. Two of their local merchants, Brown Hardware Co. and Ferron's Dept. Store, have donated trophies for local competition in both proto and spur gear class. These trophies are to be run off on a three months' point point basis. Interest is high locally with promise of keen competition.

To make conditions more favorable, the Palm Pharmacy just donated a new 100th second timer to the Eustis Club, enabling them to check those split second positions more accurately.

The Eustis boys attended the race held at St. Petersburg on Sept. 1st, where the local track record was shattered. They were right in there pitching, but the best time possible was turned in by Bill Baker and Forrest LaRoe, of Eustis, who tied for second spot at 100 MPH in spur.

LOUISIANA BOYS START TO ROLL!

WORD has been received from Fran Brennan, that colorful gentleman from the deep south, advising us that his Monroe boys are finally organized and ready to roll. According to Fran, their new 70 foot track located at the site of the old Lakeside Country Club north of Monroe, would be in shape for running over the past Labor Day weekend. It should be plenty "broken in" in time for that big New Year's Day classic coming up, where the Monroe boys and their visitors will all take a crack at the big trophy now up for the racer able to better the present world's record. (*They'll surely have to go some—take a look at that record!*)

The Monroe Club extends a cordial invitation to all to come visit and use the facilities they have to offer. Anyone of the following members will be more than happy to take you in tow and show you around: Fran Brennan, Glenn Robertson, Dr. L. L. Shlenker, B. A. Feiber, G. C. Deen, John Martin, Homer Ross, Fred Keller and Charles Burpo.

The track at Monroe will be a 70 foot affair or a 1/24th mile track. It is being built at a cost of $500 exclusive of fencing facilities. Businessmen of Monroe are contributing to the construction primarily since this is a non-profit organization devoted exclusively to a hobby designed to give much pleasure to both contestant and spectator alike. (*Keep after them Fran, you're doing a swell job!—Ed.*)

MIAMI CLUB ORGANIZES

OFFICIAL word has just been received regarding the organization of the Miami Society of Model Engineers in Miami, Florida. Their first meeting was held back in May of this year, their club now comprising 18 members. As yet they do not have a regular meeting house, but do have a 70 ft. track for racing. The track is still in the process of completion as far as fence protection is concerned for spectators. A crash fence is up however, and the track in use every Wednesday evening and Sunday afternoon. Track is located on the MacArthur Causeway connecting Miami with Miami Beach, about a half mile out from the Miami side. Considerable time is being spent in fixing the track, having the surface smoothed down by grinding and cleaning.

Their first State Meet will be held Saturday night Oct. 12th and Sunday, Oct. 13th, with over $300 value in prizes to be offered on the Grapefruit Circuit of Florida. Saturday night will be devoted to all cars exclusive of Hornet or McCoy powered jobs. Sunday will take over on the ¼ and 1 mile events.

The following officers were elected: President, Kenneth Craig, 6223 NW Miami Place; Vice President, Don Williams, 3696 Bayview Road, Coconut Grove; Sec.-Treas., Fred J. Gommo, 729 NE 126 St., (P. O. Box 1520) North Miami. Dues are now $6.00 per year, track fees to be announced at a later date.

HORNET BUILDS MODEL PROVING GROUNDS

HERE'S some good news for you model-minded fellows on the West Coast! According to Ray M. Snow, head of Hornet Engines, they are now in the process of building a huge proving grounds to test all of their merchandise and that this will be open to the public at all times. The project is located in Fresno, California, at Church and Chestnut Avenues, consisting of four acres in turf which will have one U-Control flight circle, one 1/20th mile cable race car track, one 1/20th mile non-wake reflecting type boat pond, and the largest rail track in the world, accommodating six race cars at one time. This rail track, incidentally, is 1/12th of a mile long or 440 feet in circumference. The rail track is now about 40% completed and free plans will be furnished anyone desiring to build this plant. Much time has been spent engineering the curves and angles to maintain a minimum of up or down thrust at 90 miles per hour. In other words, your cars will be "right in the groove" on this track. It is the sincere hope and ambition of Ray Snow to have the AMRCA Nationals held here in 1947. If necessary, additional cable tracks can be constructed as there is sufficient room for them. The field is located just a short distance from one of Fresno's leading airports and those fellows flying in will be offered transportation to the proving ground if desired.

Ray Snow has always been a model builder at heart and has spent considerable sums of money in this project, a non-profit enterprise enabling fellows to have full enjoyment of all sports over their weekends. According to Ray, "It has always been my ambition to have all of these hobbies consolidated into one area so that modelers who play with boats, cars and planes can put in a full day pursuing their hobby without driving all over the country. There has been great response all over California to this program of ours and from all indications, the opening meet will be the largest ever held of its kind anywhere. The San Francisco Model Power Boat Club and many fellows from Los Angeles have assured us they will be more than glad to attend with their boats and naturally the race car boys from the south and north are eager to run on the new cable track which is complete and lapped to an absolute flatness that enables a car to run at such a steady attitude that numerous unofficial records have been set in the last two weeks of over 120 miles per hour with the old style car that have been running for the last four and five years."

We are advised that this project is now about 60% complete with hopes of being ready by late October or early November. Watch these pages next month, as we are promised a series of aerial photos showing progress on the layout.

INTERSTATE MEET TO BE HELD AT DENVER

EXTENSIVE preparations are being made by the Denver Club to hold an Interstate Miniature Car Race at Denver, Colo., on Sunday, Oct. 6th. Regardless of body type, the cars are to be divided into four classes—Front Spur, Rear Spur, Ball Bearing Bevel Drive and Non-Ball Bearing Bevel. National point system will be used following national rules with many trophies and prizes to be awarded. No matter what type car or engine, fast or otherwise, each entry will have a splendid opportunity of taking home a prize. Entry fee will be $2.00 per car, races starting at 9 A.M.

LET'S BE PATIENT, FELLAS!

ED. FITZGERALD, temporary secretary of AMRCA, is a mighty busy man these days. He's literally swamped with piles of records, figures, etc., which have to be brought up to date due to the change-over in officers. He's having his troubles with the printer too, anxiously waiting the arrival of more pit badges, sanction blanks, new rule books, etc. He asks your indulgence for unanswered mail, promising faithfully to give each of you boys his best attention. So let's be just a bit patient, fellas—he hasn't forgotten you!

TORRANCE HOLDS SUCCESSFUL MEET

By STU ALESHIRE

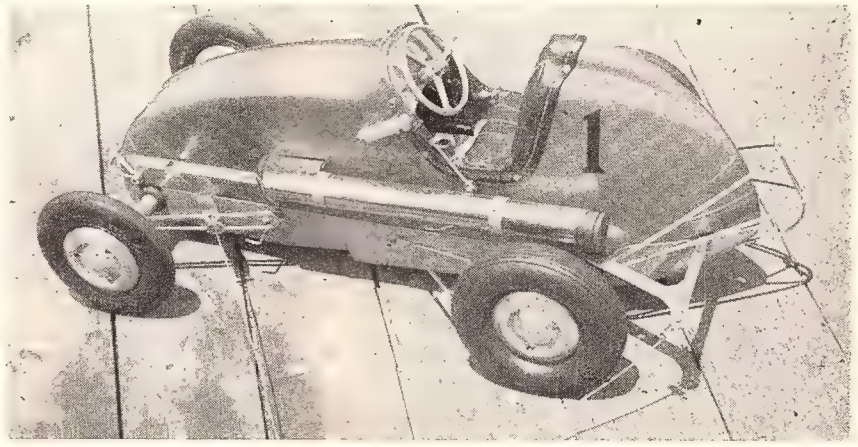
THE Torrance Club out California way, held one of its most successful monthly meets to date, on Aug. 4th. An exceptionally fine turnout of old and new members helped considerably, with only a few of the boys missing. Andy Anderson was still away at the Nationals in Detroit, and Johnny Eggleston and Tom Carter out trying their luck at fishing.

A short business meeting was first held in the morning followed with awarding of trophies won in the preceding two quarters. After this, Pres. Bill Finch gave the signal, and the racing started. The new 1/100th second timer was on hand for this contest.

Quite a few of the new Dooling protos were run at this meet, the speeds promising to be bettered with additional experience learning the tricks of the new cars. The boys are looking forward to the new proto by Dura-matic.

Mrs. Bill Finch was kind enough to spend the entire day acting as gate keeper and for the first time in several months, the pits were kept clear of all but contestants. "Good work Mrs. Finch, keep it up". May we have other volunteers from our member wives?

Pappy Graham of Phoenix, Ariz., dropped in near the close of the meet to renew acquaintances and meet the new fellows.



Aleshire Photo

Dooling Proto owned by Norb Janssen, of the Torrance Race Car Club. This car, in spite of all the "ginger bread" which has been added, has a recorded time of 93.94 MPH at the AMRCA Regional Meet at San Francisco. This same car took first place in the "Best Appearing Car Contest" at the IMRCA International Contest at Ontario, Calif.

He brought news that he and Col. P. Davis Barnes and a few other Phoenix "bugs" have been able to promote a track in Phoenix. We are all looking forward now to a trip there to open the new track.

Again we invite you fans in this area to come out to our club meets held the first Sunday of each month and to our practice runs held each weekend.

PROTO	MPH
B. Oliphant: Own car, Hornet	95.84
A. Poore: Dooling, Hornet	95.54
A. Boortz: Dooling, Hornet	94.33
G. Williams: Own car, Hornet	94.04
G. McChesney: Own car, Hornet	91.64
N. Janssen: Dooling, Hornet	90.00
B. Hughes: Dooling, Hornet	89.64
B. Finch: Dooling, Hornet	88.66
S. Swidler: Dooling, McCoy	83.02

SPUR GEAR

T. Aleshire: McCoy, Hornet	108.63
L. Paradiso: McCoy, Hornet	107.71
G. Axelson: McCoy, Hornet	103.47
N. Janssen: McCoy, Hornet	101.18
L. Hinkle	100.78
N. Graves: V-Car, McCoy	99.44
Devore: McCoy, McCoy	92.83
A. Murman: Dooling Str., McCoy	71.93

1890 CORR'S

During the time of Woodrow Wilson's presidency of the United States, and through the long hard years of the first World War, Corr's

CORR'S 1946

served American Hobbyists with pride and distinction. Today we are still prepared to serve you from the same address in Capitol since 1890.

MODEL BOOKS

Ship Model Building, G. Johnson	$2.50
High Iron	6.00
Loco. Plan Package	2.00
Plane Model Winners	1.00
Model Airplane Design	3.75
Model R.R. Engineering	3.50
Model R.R. Plan Package	1.00
Fun With A Model R.R.	1.00
Model R.R., by E. P. Alexander	5.00
Wylams' Scale Models—No. 1 & No. 2	1.50

"MISC'L R. R. ITEMS"

Rail Joiners "HO" brass, 100 for	$ .90
Rail Joiners "O" brass, 100 for	1.00
Varney Tie Strip "HO", 100 feet	1.50
Switch Kits "HO" comp. with tie strip	1.25
Assembled "HO" Turnouts, Brass	2.25
Varney "HO" Boiler Castings Consol. Pacific Dockside, ea.	4.50
Switch Machines Walthers, ea.	2.00
HO Track Layers	1.50

GAS MOTORS

Immediate Delivery

Bullet, "B"	$12.75
Arden, "A"	19.50
Fleetwind, "C"	24.75
Delong, "B"	24.50
McCoy, "C"	35.00
Hornet, "C"	35.00
Dennymite, "C"	17.85
Hurricane, "B"	19.75
Merlin, "B"	21.50
Melcraft, "B"	18.50
Rogers 29, "B"	15.75
Rocket, "C"	22.50
O'K 60, "C"	21.00
Atwood, "C"	23.50
Rogers Ram, "B"	10.95
Thor, "B"	9.95
Cannon 300 "B"	19.50
Cannon 358 "C"	21.50
Perky "A"	18.00
Minijet	35.00

We have a complete stock of all leading gas motor parts.

WALTHER'S LOCO KITS

B-Electric (1 motor truck)	Kit	$60.00
	Finished	75.00
B-Electric (2 motor truck)	Kit	70.00
	Finished	85.00

CONTROL LINE KITS

P. D. Q.	$ 5.00
Whizzer	9.95
Duraplane	15.00
Topping	10.00
Cyclone	4.95
Atomic	3.50
Super V Shark	4.95
Amco Trainer	3.95
Short Snorter	2.95
Sting Ray	4.75
Miss Behave	3.95
Miss Behave Streamline	4.95
Bipe	3.95
Black Widow	12.50
Tarpon	10.75
Edco-Meteor	8.95
Swift	7.50
Ercoupe	7.50
Knight Twister	7.75
Meteor	8.95
Demco Special	7.95

PITTMAN

Ammeters 0-15 (DC)	ea.	$3.50
Voltmeter 0-15 (DC)	ea.	3.50
Armatures, 5 pole—12 volt		2.75
Motor DC71, 12 Volt	7.00	
Motor DC60, 12 Volt	5.00	

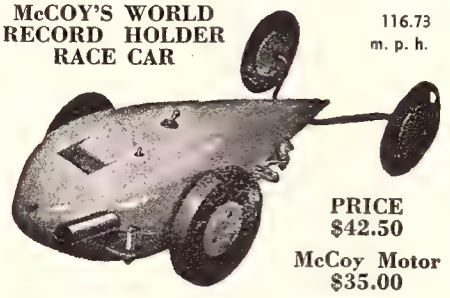
CIRCUS CARS "O" GA.

Wardie-Jay

Water Wagon	$2.00
Stock Car	2.95
Flat Car	1.50
Canvas Wagon	1.75
Baggage Wagon	2.00
Calliope	3.00
Stake & Chain Wagon	2.00
Paint Sets for Circus Cars	sets 1.50

★ SMALL ENOUGH for Class B. Can be installed in control line models. The last word in scientific plane control by radio! Equipment furnished includes transmitter in black crinkled finished metal case size 4 x 4 x 6", range approximately 2 miles; receiver size 4 x 1 7/16 x 2¾" high weight 5 ounces, operates on 4 Pen-Light batteries (2 ounces); 1-45V, "B" Battery (8½ ounces); and escapement unit size 2¼ x 1⅛ x 1" high, weight 1 ounce (not shown). Also useful in model railroading for radio train control **$59.50**

McCOY'S WORLD RECORD HOLDER RACE CAR 116.73 m. p. h.



PRICE $42.50

McCoy Motor $35.00

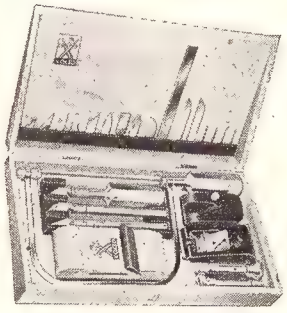
CORR'S DE LUXE CATALOG

52 pages — Planes, Ships, Tools, Accessories, etc. Post Paid **25c**

New Authenticast Catalog
Metal Ships—Tanks—Planes—35c

SPECIAL MODELERS TOOLS

"Kwikheat" Soldering Irons, 225 watt thermostatic control	$11.00
Ungar Soldering Pencil	2.00
Extra Points $1.00	
Drills 61 to 80, with case	4.00
Graham Modelers Vise	2.95
Handee Motor Tool, complete with acces.	27.50
Burgess Deluxe Vibro Tool complete with acces.	16.50
New Burgess Vibro Tool	7.50
Dremel Motor Tool, complete with acces.	23.50



No. 85 X-acto Tool Chest—3 all-metal knives; assortment of blades; saw; sander; stripper; planer, 2 drill holders; 10 drills; 6" steel ruler; complete in wooden chest, $12.50. (Illustrated)

X-ACTO #1 & #2 Knife	$ .50
#51 & #52 Knife	1.00
#5 Mat Knife	1.00
#83 Deluxe Knife Set	5.00
#80 Whittlers Set	2.00

"STAR LINE"

HO Truss Bridge Kit	$1.75
HO Cattle Pen Kit	1.00
HO Trestle Kit	1.25
HO Under-Pass Kit	3.00

LEHIGH "HO" KITS

40' Box Cars, 6 nos., comp.	$2.50

WESTBROOK "O" GA. KITS

Reefer Stock Box Body Kits, improved	$1.50
Flat Car Kits complete (less trucks)	3.00
Gondola Car Kits complete (less trucks)	3.25
Hardware Kits only	2.75

"GAS MODEL PICK UPS"

Aero Coils, Featherwt.	$2.50
Aero Coils, Quality	3.00
Wilco Coils	1.95
Smith Coils	2.75
Metal Condensers	.35
Universal Needle Valves	.75
Universal Joints	.75
Storage Batteries, 2 volt	2.75
Storage Batteries, 4 volt	3.50
Champion Spark Plugs, ¼ or ⅜	.50
Battery Boxes, Sm-Med., ea.	.40
Landing Gears, Davis "A-B"	2.85
Landing Gears, Davis "C"	3.45
Motor Mounts, lg., 60c; med.	.50

"HO" LOCO KITS

Varney Dockside Switcher	$15.00
Mantua 8 Ball	28.50
Collier's GG1 casting set comp. with 2 motors—less wheels	23.00
Drive wheels and axles for above	6.00

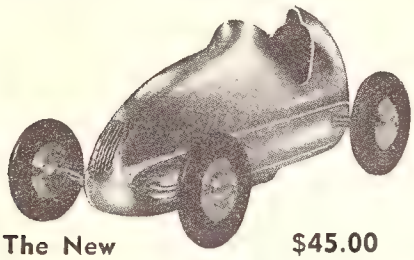
Established 1890

CORR'S

NATION'S HOBBY SUPPLY

812 9TH ST. N.W. WASHINGTON 1, D. C.

HERE THEY ARE!!!
NEW Cars - Motors - Accessories

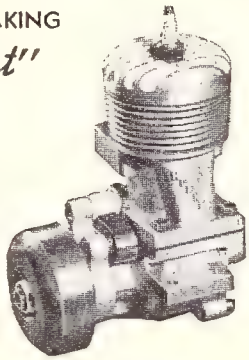


The New $45.00

DOOLING Prototype

Ball bearing throughout. Large bevel gears—including new type universal and flywheel. Really the most beautiful thing on wheels.

RECORD BREAKING
"Hornet"
$35.00



We are the National Distributors for this record breaking wonder. Place your orders today for early delivery.

World's Record McCOY Racing Car

$42.50

The famous all Ball Bearing McCoy. The Super Streamliner for Super Speeds.

NEWS!!! The McCoy Racing Engine available for immediate delivery ... $35.00

PARTS ANNOUNCEMENT!!! As before the war, we are again stocking a most complete line of Wheels, Tires and Parts for the popular cars and engines.

RAILROAD FLASH!

We are proud to announce that we are the Mid-Western States distributors for the SCALE-CRAFT line of "O" and "OO" gauge model railroad kits and supplies. Dealer territories now available. Write today and operate an outstanding and profitable rail department. We also feature stocks from Picard, Varney, Mantua, A-C, Skyline, Ideal, Lehigh, Bathgate, True-Scale and others.

Racing Hydroplanes in Many Types Are Available Again!

DEALERS: Write, wire or phone us today for these items or any other popular Hobbycraft Needs.

TROST
Model Airplane and Hobbies
3111 W. 63rd St. CHICAGO, ILL.

THE "DEACON" WINS ALL-PROTO RACE

By ED HITZE

C. A. KEAN, "The Deacon," of Brownburg, Ind., came through the winner of the Second Annual All-Proto Labor Day Race at Lafayette, Ind., Sept. 2nd. While he had Joe Gaebler and Glen Fairabend to contend with, he bested both to chalk up another win for himself and his fast Pacemaker car. Not too many cars were on hand, being just 19 in all, but a good time was had by everyone and the Lafayette Club awarded 12 trophies, giving just about everyone a chance to take home some hardware. It is planned that next year the local club will have a Nationwide all-proto race for Labor Day and hope it will attract entries from both Coasts as well as the Mid-West. More about this at a later date. Summary follows:

ALL PROTOS	MPH
C. A. Kean, Pacemaker-Hornet	104.40
G. Fairabend, Own car-Hornet	103.44
J. Gaebler, Pacemaker-Hornet	103.32
Curly Haughn, Own car-McCoy	101.09
J. Olender, Pacemaker-Hornet	100.67
E. Hitze, Own car-Hornet	100.55
H. Harrison, Pacemaker-Hornet	97.82
E. Stark, Own car-Hornet	97.40
R. Carithers, Pacemaker-Hornet	97.19
O. Hart, Own car-Hornet	96.56
B. Cronin, Pacemaker-Hornet	95.33
P. Snideman, Pacemaker-Hornet	93.45
K. Smith, Pacemaker-Hornet	91.74
F. Strong, Pacemaker-Hornet	89.73
G. Spencer, Own car-Hornet	86.28
I. Hassad (proxy), Hassad-Hassad	86.04
A. Payne, Own car-Hornet	85.47
D. Dorney, Dooling-Cyclone	63.06

RESULTS OF RACE AT CHAMPAIGN, ILLINOIS, JULY 21

SPUR GEAR CLASS:

	MPH
G. Coffield, Sr., Rock Island, Ill.	110.15
J. Crossan, Rock Island, Ill.	109.48
L. Wallace, Indianapolis, Ind.	107.52
G. Coffield, Jr., Rock Island, Ill.	106.76
Ed Hitze, LaFayette, Ind.	106.38
Dr. Fleener, Paris, Ill.	106.25
C. Allen, Danville, Ill.	105.26
B. Wassi, Pekin, Ill.	105.26
G. Matthews, Rockford, Ill.	105.01
J. Gaebler, Indianapolis, Ind.	104.65
R. Brooks, Rock Island, Ill.	104.65
R. Davis, Harvey, Ill.	104.16
R. Stevens, Peoria, Ill.	103.80
A. Retner, Moline, Ill.	103.32
C. Sapp, Peoria, Ill.	103.32
O. Hamm, Rock Island, Ill.	102.85
G. Francis, LaFayette, Ind.	102.50
J. Carlson, Chicago, Ill.	101.58
W. Glatthaar, Belleville, Ill.	101.01
K. Smith, Indianapolis, Ind.	100.44
O. Hart, LaFayette, Ind.	100.11
L. Marcotti, Kankakee, Ill.	98.14
F. Matthews, Rockford, Ill.	96.25
R. Oliver, Peoria, Ill.	96.05
R. DuCharme, Kankakee, Ill.	93.20
H. Laflame, Kankakee, Ill.	91.27
B. Culp, Peoria, Ill.	89.28
V. Cundiff, Danville, Ill.	88.23
W. Glatthaar, Belleville, Ill.	84.34

PROTOTYPE CLASS:

H. Harrison, Plainfield, Ind.	101.69
J. Olender, Indianapolis, Ind.	100.00
J. Crossan, Rock Island, Ill.	99.66
F. Matthews, Rockford, Ill.	99.22
R. Brooks, Rock Island, Ill.	98.75
C. A. Kean, Brownsburg, Ind.	97.82
H. Wyckoff, Chicago, Ill.	97.61
Ed Hitze, LaFayette, Ind.	96.77
V. Cundiff, Danville, Ill.	96.56
J. Vick, Danville, Ill.	96.46
R. Carithers, Danville, Ill.	95.84
J. Gaebler, Indianapolis, Ind.	94.33
J. Olender, Indianapolis, Ind.	94.04
M. Mae, Oakland, Ill.	92.11
H. Suddeth, Indianapolis, Ind.	91.24
J. Carlson, Chicago, Ill.	90.18
R. Davis, Harvey, Ill.	90.18
G. Spencer, Champaign, Ill.	90.00
C. Meyers, Chemoaign, Ill.	89.91
J. R. Kern, Champaign, Ill.	89.55
Dr. Fleener, Paris, Ill.	87.37
B. Palmissano, Champaign, Ill.	86.62
A. Payne, LaFayette, Ind.	86.12
H. Suddeth, Indianapolis, Ind.	82.26
G. Eastman, Champaign, Ill.	81.66

RESULTS OF RACE AT HARTFORD CITY, INDIANA— AUGUST 4, 1946

SPUR GEAR:

	MPH
W. White, Ontario, Calif.	107.14
A. Anderson, Los Angeles, Calif.	102.50
Ed Hitze, LaFayette, Ind.	102.38
A. Gil, Hamilton, Ohio	101.46
K. Smith, Indianapolis, Ind.	100.67
J. Wilson, Anderson, Ind.	100.33
F. Brennan, Monroe, La.	96.56
B. Liston, Anderson, Ind.	93.36
C. Rea, Hartford City, Ind.	93.16
D. Wilson, Anderson, Ind.	92.68
F. Beeler, Anderson, Ind.	92.02
J. Crow, New Castle, Ind.	88.06
E. Luttrell, New Castle, Ind.	81.31

PROTOTYPE CLASS:

W. White, Ontario, Calif.	102.04
Ed. Hitze, LaFayette, Ind.	99.22
A. Anderson, Los Angeles, Calif.	98.14
K. Smith, Indianapolis, Ind.	97.50
H. Harrison, Plainfield, Ind.	96.35
O. Hart, LaFayette, Ind.	95.23
J. Olender, Indianapolis, Ind.	95.03
H. Wyckoff, Chicago, Ill.	94.83
J. Gaebler, Indianapolis, Ind.	92.87
F. Brennan, Monroe, La.	89.46

RESULTS OF RACE AT LAFAYETTE, INDIANA— AUGUST 18, 1946

SPUR GEAR:

	MPH
G. Coffield, Sr., Rock Island, Ill.	110.42
L. Wallace, Indianapolis, Ind.	109.35
W. Borden, Zion, Ill.	108.17
G. Coffield, Jr., Rock Island, Ill.	108.17
J. Gaebler, Indianapolis, Ind.	106.13
J. Ogden, Detroit, Mich.	103.56
J. Kuha, Detroit, Mich.	103.56
K. Smith, Indianapolis, Ind.	103.09
M. Knell, Urbana, Ill.	100.22
Ed Hitze, LaFayette, Ind.	99.33
D. Cailey, Harvey, Ill.	99.11
H. Hargraves, Anderson, Ind.	98.36
T. Cronin, Hartford City, Ind.	98.35
J. Woytas, Blue Island, Ill.	98.03
B. Cronin, Hartford City, Ind.	97.79
O. Hart, LaFayette, Ind.	96.77
J. Wilson, Anderson, Ind.	96.77
J. Carlson, Chicago, Ill.	96.46
R. Davis, Harvey, Ill.	95.13
L. Weisenborn, Brookville, Ohio	92.97
R. Thorp, Kokomo, Ind.	92.78
P. Snideman, LaFayette, Ind.	92.49
H. Porter, Cicero, Ind.	87.54
E. Luttrell, New Castle, Ind.	87.54

PROTOTYPE CLASS:

D. Martell, Detroit, Mich.	104.65
C. Kean, Brownsburg, Ind.	104.04
M. Lewis, Libertyville, Ill.	102.04
J. Mayfield, Waukegan, Ill.	101.58
J. Crossan, Rock Island, Ill.	100.00
G. Fairabend, Detroit, Mich.	99.00
Ed Hitze, LaFayette, Ind.	98.68
H. Wyckoff, Chicago, Ill.	98.03
O. Hart, LaFayette, Ind.	97.71
J. Gaebler, Indianapolis, Ind.	95.54
J. Olender, Indianapolis, Ind.	94.83
Dr. Fleener, Paris, Ill.	93.84
H. Harrison, Plainfield, Ind.	93.45
V. Cundiff, Danville, Ill.	93.36
E. Stark, Paris, Ill.	93.16
R. Carithers, Danville, Ill.	93.16
J. Vick, Danville, Ill.	93.16
W. Thiessen, Kankakee, Ill.	90.81
A. Payne, LaFayette, Ind.	89.73
J. Carlson, Chicago, Ill.	89.55
C. Meyer, Flint, Mich.	84.50
K. C. Smith, Indianapolis, Ind.	83.48

(Best looking car trophy to John Crosson donated by Bob Smiley's Jewelry Store)

RESULTS AT HARVEY, ILLINOIS—SEPT. 8, 1946

SPUR GEAR:

	MPH
G. Coffield, Sr., Rock Island, Ill.	108.95
J. Crossan, Rock Island, Ill.	106.38
R. Brooks, Rock Island, Ill.	105.50
G. Matthews, Rockford, Ill.	103.44
Al Hudson, Rock Island, Ill.	102.85
C. Allen, Danville, Ill.	102.62
H. Kneip, Waukegan, Ill.	102.27
E. Stump, Harvey, Ill.	101.69

Red Davis, Harvey, Ill.	101.69
G. Coffield, Jr., Rock Island, Ill.	100.89
R. Stephans, Creve Clove, Ill.	100.55
J. Carlson, Chicago, Ill.	99.88
C. Williams, Peoria, Ill.	97.93
A. Cervenka, Jr., Chicago, Ill.	92.11
J. Woytas, Harvey, Ill.	91.93
H. LaFlamme, Kankakee, Ill.	91.83

PROTOTYPE CLASS:

J. Mayfield, Waukegan, Ill.	100.67
J. Gaebler, Indianapolis, Ind.	97.71
F. Matthews, Rockford, Ill.	97.08
J. Crossan, Rock Island, Ill.	96.87
Ed Hitze, LaFayette, Ind.	96.15
R. Brooks, Rock Island, Ill.	94.24
H. Wyckoff, Chicago, Ill.	91.93
P. Snideman, LaFayette, Ind.	91.37
J. Olender, Indianapolis, Ind.	90.72
C. Johnston, Waukegan, Ill.	90.09
A. Shriver, Creve Clove, Ill.	88.32
J. Carlson, Chicago, Ill.	87.46
J. Kern, Champaign, Ill.	83.10
R. Davis, Harvey, Ill.	82.87
L. Johnson, Chicago, Ill.	82.56
D. Eastman, Champaign, Ill.	82.41
G. Urban, Hammond, Ind.	76.92
A. Dantzler, Cicero, Ill.	76.46
G. Mooth, Chicago, Ill.	71.88
D. Cailey, Homewood, Ill.	66.17

(Best looking car trophy to Frank Matthews donated by Steve's Hobby Center, Chicago.)

RESULTS OF RACE AT KANKAKEE, ILLINOIS— AUGUST 25, 1946

SPUR GEAR:

	MPH
G. Coffield, Sr., Rock Island, Ill.	112.63
L. Wallace, Indianapolis, Ind.	112.21
G. Matthews, Rockford, Ill.	111.66
R. Brooks, Rock Island, Ill.	110.97
Dr. Fleener, Paris, Ill.	110.42
G. Coffield, Jr., Rock Island, Ill.	109.62
K. Smith, Indianapolis, Ind.	107.39
D. Cailey, Harvey, Ill.	106.88
C. Williams, Peoria, Ill.	106.76
M. Knell, Urbana, Ill.	104.98
C. Allen, Danville, Ill.	104.65
C. Sapp, Peoria, Ill.	102.85
B. Chapman, Kokomo, Ind.	101.58
R. Davis, Harvey, Ill.	101.35
Al Hudson, Rock Island, Ill.	100.44
L. Marcotti, Kankakee, Ill.	100.00
L. Camus, Schneider, Ind.	96.77
J. Woytas, Blue Island, Ill.	96.56
R. Thorp, Kokomo, Ind.	95.74
J. Mintefering, Chicago, Ill.	95.23
A. Cervenka, Jr., Chicago, Ill.	92.30
B. Schoenfeldt, Chicago, Ill.	89.10
G. Spaulding, Kankakee, Ill.	76.27

PROTOTYPE CLASS:

C. Kean, Brownsburg, Ind.	105.14
J. Mayfield, Waukegan, Ill.	102.50
Dr. Fleener, Paris, Ill.	99.66
H. Harrison, Plainfield, Ind.	99.33
R. Brooks, Rock Island, Ill.	99.00
E. Stark, Paris, Ill.	98.36
Ed Hitze, LaFayette, Ind.	98.25
O. Hart, LaFayette, Ind.	96.77
K. Smith, Indianapolis, Ind.	96.77
H. Wyckoff, Chicago, Ill.	96.77
C. Johnston, Waukegan, Ill.	96.25
V. Cundiff, Danville, Ill.	94.04
R. Carithers, Danville, Ill.	93.36
G. Spencer, Champaign, Ill.	92.02
W. Thiessen, Kankakee, Ill.	92.02
J. Carlson, Chicago, Ill.	92.02
R. Davis, Harvey, Ill.	91.74
D. Eastman, Champaign, Ill.	89.64
G. Mooth, Chicago, Ill.	85.71
C. Elgin, Chicago, Ill.	78.80

NEW TRACK PROMISED FOR SUSQUEHANNA BOYS!

BIG MEMBERSHIP DRIVE NOW UNDER WAY TO BOOST CLUB

FINALLY, and at last! Good news for those patient boys from Susquehanna Valley! With all their tireless efforts at last paying off, the Susquehanna Valley Miniature Racing Club has now received support to start the racing hobby in their locality. This area takes in the cities of Binghamton, Johnson City and Endicott,

(*Continued on page 54*)

POWER — PEP — PUSH

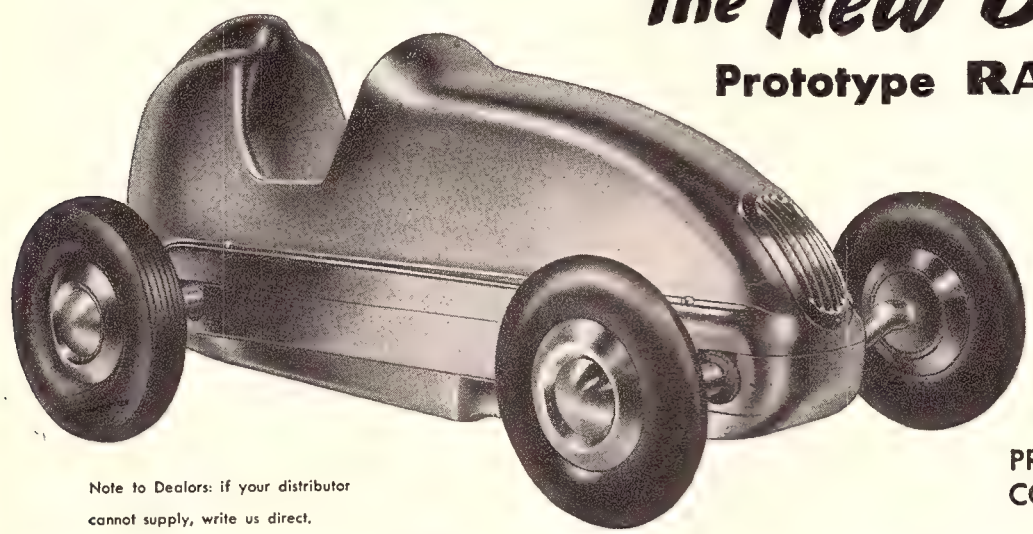
Tiger
GAS ENGINE FUEL

Made especially to give you the dependable power you want from your gas model engine. Finest quality mixture you can get and Pyroil treated to give longer engine life. Ask your dealer for the yellow and black Tiger can. Pint 30c

JOBBERS - DEALERS
If you are not already carrying Tiger Fuel Mixture and other Tiger products, write for illustrated folder of complete line today.

TIGER PRODUCTS CO.
CHICAGO 6, ILL.

The New Dooling Prototype RACE CAR



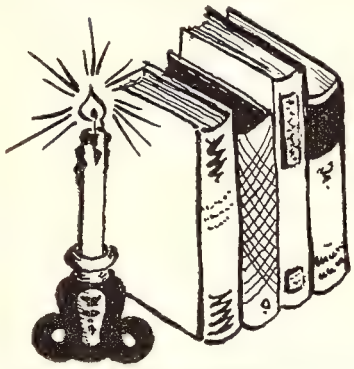
Note to Dealers: if your distributor cannot supply, write us direct.

PRICE COMPLETE $45.00

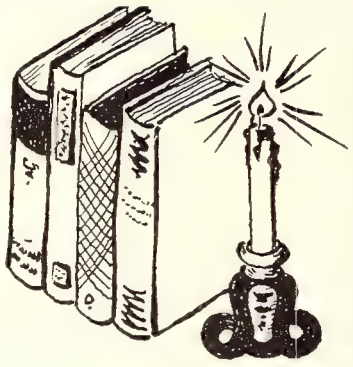
The Finest in *Race Car* Design and Workmanship

BALL BEARING DRIVE UNIT • BALL BEARING FRONT WHEELS
DOUBLE UNIVERSAL AND FLYWHEEL INCLUDED • KNEE ACTION FRONT END SUSPENSION
WHEEL HUBS MACHINED FROM DURALUMIN BAR STOCK AND BALANCED
BODY -- 2 PIECE DIE CAST MAGNESIUM

SEE YOUR LOCAL DEALER
WRITE FOR CIRCULAR
DOOLING BROTHERS
5452 WEST ADAMS BLVD.
LOS ANGELES 16, CALIF.

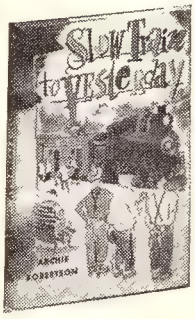


BOOKS



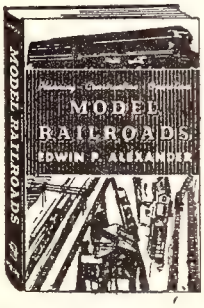
for technical knowledge, historical fact or real entertainment read the cream of model hobby books, listed below.

Don't Miss Them



RI8-SLOW TRAIN TO YESTERDAY, by Archie Robertson. Tells in a lively manner the story of Short Line trains which helped build America. Here you'll find romance as well as fact; humor as well as history. Just off the press. Quaintly illustrated. **$3.00**

R2—Model Railways, by Harold V. Loose. Simply and accurately written, giving complete instructions on planning, installing and operating a model railroad. Profusely illustrated with detailed diagrams. **$2.00**



R5 — Model Railroads, by Edwin P. Alexander. This comprehensive work on model railroading offers a wealth of information on plan-construction and operation. Profusely illustrated with photographs, plans and drawings. Beautifully printed. **$5.00**

R4—Making and Operating Model Railroads, by Raymond F. Yates. Covers in detail gauge and scale, with directions for converting, layout, right-of-way and background scenery and the whole model railroad field **$3.00**

R6—Model Railroad Engineering, by David Marshall, deals with model track signals, cars, locomotives, as well as standard practices of operation. It covers the history and character of real railroading, engineering problems and principles of design **$3.50**

ORDER

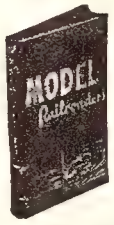
B3 — Ship Model Building, by Gene Johnson, takes you through every stage of construction in simple, understandable language. With more than 750 illustrations, it makes every step clear. **$2.50**

B2—Clipper Ship, "Sovereign Of The Seas," by H. Armitage McCann. Complete instructions for building an accurate model of the full rigged American Clipper. Contains 86 working drawings and 2 full size folding plans for larger parts of the ship. **$2.50**

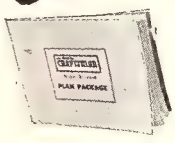
B5—The Built-Up Ship Model, by C. G. Davis. Instructions in framing and planking a model in the same manner as the prototype. Includes plans for a 16-gun brig and several other interesting vessels. Complete with photographs and plans. **$5.00**

RI—RIDING THE TINPLATE RAILS, by Louis H. Hertz, reads like an historical novel. Written in an entertaining style, it contains many hitherto unpublished facts and is a treasure of Americana. About 300 pages, profusely illustrated in cloth binding.....**$3.50**

R3—Fun With a Model Railroad, by L. W. Sagle, is the new book which teaches railroad practice "painlessly". Besides bringing you a lot of useful knowledge, it is full of really clever cartoons, the kind every model railroader will recognize as typical incidents on his pike. All this for only **$1.00**



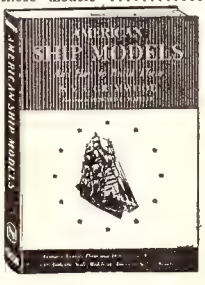
R8 — BOOK OF RULES FOR MODEL RAILROADERS, by L. W. Sagle. Covers use of signals; routing tracks; train priorities; use of main lines, sidings, branch lines. Applies real railroading to your model pike. Illustrations and charts. **$2.50**



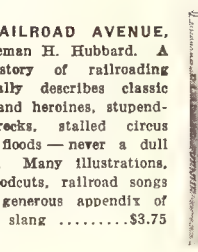
R9—Model Railroad Plan Package. Where else could you get 49 large size plans and specifications for building a variety of model railroad equipment for **$1.00**

RI9 — LOCOMOTIVE PLAN PACKAGE consists of 24 carefully selected plans of locos, correctly scaled for model construction, together with simplified printed instructions. All types from switchers to mammoth Articulated Locomotives. **$2.00**

A4—Model Gasoline Engines, by Raymond F. Yates. Profusely illustrated, it covers all fine phases of model airplanes, boats and race cars. Priceless information on care and operation of model gas engines, along with plenty of plans for building these models **$2.50**



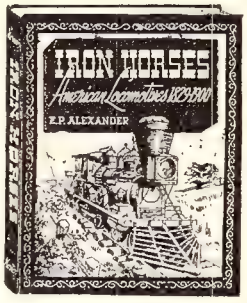
BI—American Ship Models and How to Build Them, by V. R. Grimwood. Guides the model builder from a very simple model through all phases of building and rigging of a complicated full-rigged ship. Twelve complete working plans, authentic, technically accurate, especially drawn for model building. Glossary of terms. **$6.00**



R20—RAILROAD AVENUE, by Freeman H. Hubbard. A great story of railroading graphically describes classic heroes and heroines, stupendous wrecks, stalled circus trains, floods — never a dull moment. Many illustrations, rare woodcuts, railroad songs and a generous appendix of railroad slang **$3.75**

R12—Cable Car Days, by Edgar M. Kahn. Apart from its downright entertainment value, trolley fans will welcome the work as the first truly adequate survey of the growth of a city's street-railway network. Finely printed and illustrated with photographs and line drawings **$3.00**

R13 — Iron Horses, by Edwin P. Alexander. American Locomotives 1829-1900. It consists of 123 prints made from old lithographs and drawings showing practically every locomotive type in the period mentioned, accompanied with descriptions and technical information **$5.00**



R15—How to Build a Model Railroad, by Harold V. Loose. Anything having real worth will endure—this is why this book has been a best-seller since 1939. It gives complete information on building a model railroad from beginning to end and is as important for the seasoned modeler as for the beginner.....**$2.00**

R21—HIGHBALL, a Pageant of Trains by Lucius Beebee. For connoisseurs of locomotive, coach & caboose. Rare fusion of wonderful pictures & vivid prose; 170 photos by author or from cherished collections **$6.00**

NOW!

B4 — Ship Models Illustrated, by F. Ward Harmon, is a real picture book of real ships, ship models, masts, rigging, deck gear. Many color plates, detailed drawings and plans, glossary, salty text ...**$2.00**

B6—How to Build a Model Navy by C. H. Gilmore. Deals with models of battleships, cruisers, destroyers, airplane carriers, submarines and all the small scouting and working boats of a mighty modern Navy in proper scale. Plans for one boat in each classification included. A juvenile book which will appeal to the adult **$2.50**

MODEL CRAFTSMAN, Dept. BX-1046, RAMSEY, N. J.
Gentlemen:

Please ship me the following books I have listed by number .....

Enclosed is my remittance of ....., check ☐, money order ☐, currency ☐; (add 5c to checks)

Name .....(Outside U. S. add 25c for first

Address .....book and 10c for each additional)

INTERLOCKING PLANT

(*Continued from page 32*)

is a piece of ladder strip suitable for your gauge. It is bent to parallel the upright in a verticle plane about six scale inches out from the upright. Solder at the top to piece "n," at the bottom to the lowest I-beam "l" and to the middle I-beam by means of a bracket. Using the plan view in fig. 3, locate eleven holes for the hand-rail. These will be located on the top surfaces of pieces "f" and "n." These holes need not be accurate, as the vertical pieces are soldered into pieces "f" and "n." I used a block of wood as a spacing jig, installed pieces of wire slightly longer than required and then using the jig as guide, cut them to proper length. The two uprights adjoining the top of the ladder are bent in one piece with the horizontal rail. The other nine vertical pieces were installed as previously described and the horizontal rail soldered to them. The walk-way is a piece of model airplane wood, 1/32" thick, cut to fit and scribed to represent eight 6" planks running lengthwise of the signal bridge; cement to pieces "f." Let the installation of the walk-way rest until after painting the balance of the bridge.

Accordingly, I have designed new types of targets which use pea-lamps without sockets, thus obtaining a much more nearly scale effect. One of these targets is shown in a block signal in the foreground of the photo. Remember, that any light on the market is too large to make a real scale signal in OO or HO and that the design for those gauges is merely near scale.

Two plans for the latter signal head and target are shown in fig. 2. The complete plan is half size for O gauge and detailed plan of the light itself shown double O gauge size. These plans are self-explanatory. In the smaller size, I use a .22 calibre cartridge case and a 4 mm. pea-type bulb, while in the larger gauge brass tubing and a 5 mm. light is used. The ends of the tubing or cartridge case which protrudes from the target is cut at a 45° angle, after which the tubes are mounted in the target and soldered in place. Pea lamps of proper size and color are slipped into the tubes from the rear of the signal. One lead is soldered to the side of the tube and the other to a #28 double-silk lead-in wire. Cement and insulate the lead-in wire with plastic wood, being careful that the lead-in wire does not ground to either the other wire or tube. Make the lead-in wire plenty long (about four feet) to permit for damaged insulation when pulling through the conduit. Paint it in spots with the color corresponding to the light served for future reference. When the three lights have been installed, thread all three lead-ins through the conduit at one time, solder the upper surfaces of the two upper light-tubes to brackets "i" and then pull the lead-in wires taut. To replace a lamp, remove the signal head from the bracket, punch out the burned-out lamp with a nail punch and replace the lamp.

Now is the time to paint the bridge. Signal heads and target are dull black lacquer, the concrete bases are painted a concrete gray and the remainder of the structure aluminum. The walk-way should be painted a darker gray before cementing into position.

HOLLYWOOD MODEL
TREES & SHRUBS

Add more life to your pike! Natural growth from Calif. mountains, carefully processed, dyed and coated to give natural appearance. Inexpensive, long-lasting, washable. In HO, O and Extra large sizes. FREE illustrated folder shows complete line of trees and shrubs and money-saving Kits.

Sample Kit No. 320 (HO size). 42 pieces, including orange, apple, shade, tall, and pine trees, hedges, bushes, shrubs, 2 oz. jar green enamel, imitation grass, U. S. mail and storage boxes. Regular $6.08 value, only $5.00. Money-back guarantee.

Kit No. 330 (O size). 35 pieces. Regular $5.94 value for $5.00.

Your dealer can supply you, or we will ship direct, postpaid. Send check or money order. Dept. MCI.

BERT WELCH COMPANY
128 South Hoover Street, Los Angeles 4, California

ICKEN "O" GAUGE

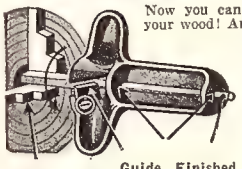
CUSTOM BUILT LOCOMOTIVE CATALOGUE

For the man who appreciates fine craftsmanship and material.

Send a quarter for your copy now and be informed.

ICKEN MODEL LOCOMOTIVE CO., INC.
HARRINGTON PARK (Est. 1927) NEW JERSEY

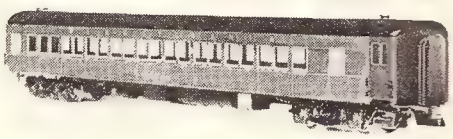
DOWEL TROUBLES?

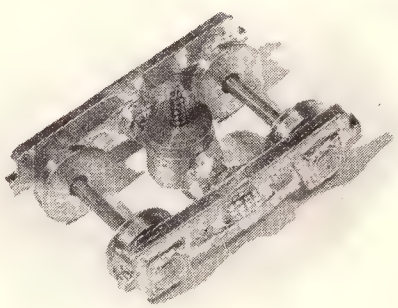


Now you can make dowels that match your wood! Amazing new SPEE-DOWL makes perfect, burnished dowels for arrows, cabinet work or other projects. Simply rotate wood in lathe or drill press and push on SPEE-DOWL! Works like pencil sharpener. Cast aluminum body, tool steel blade. A necessity for fine craftsmanship. Available in 2, 3, 4, 5, 6, 7, and 8/16" sizes. Only $1! Send check or M. O. now for your SPEE-DOWL. Special—any 4 sizes $3; complete set of 7 for $5. Unconditionally guaranteed. Free literature.

SPEE-Dowl, Dept. K., 34 Mall Dr., North Plainfield, N. J.

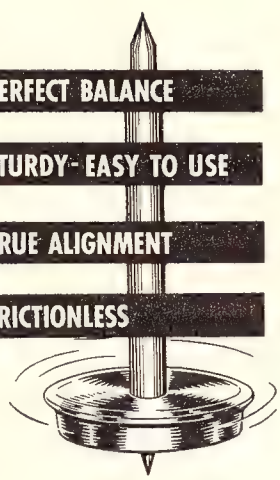
Roll 'em on Megow HO trucks!





$1.25

PERFECT BALANCE
STURDY-EASY TO USE
TRUE ALIGNMENT
FRICTIONLESS



Make your model railroad detailed perfection with Megow passenger car trucks. So perfectly balanced, so true in alignment they spin like a gyro top. Needle point, frictionless bearings make these trucks coast actually five to ten times as far. Authentic in detail; precision assembled and packaged ready for use. Make your railroad the finest. "Roll 'em on Megow HO trucks!"

See your local dealer.

The Megow Corp., Howard & Oxford Sts., Philadelphia 22, Pa.

EXPORT AGENT: GUITERMAN & CO. INC. 35 S. WILLIAM ST. NEW YORK (4)

HERE IS THE CONTROL that adds new thrills to U-Control flying. With Jim Walker's U-Reely Control *no flying field is needed* . . . you can hand launch your plane, fly it out to 150 feet, and return it to your hands without it touching the ground. Read these outstanding features:

1. **PRECISION FIT** • .005 in. running clearance and .001 in. tolerance assures positive containment of wires.
2. **NEW POSITIVE BRAKE** • Stainless steel brake band will hold to the safe limit of control wires.
3. **BRAKE LIMITER** • Adjustable tension screw for smooth stops.
4. **COMPLETELY WATERPROOF** • All metal parts are aluminum alloy, nickel plated or stainless steel.
5. **NON-SLIP GRIP** • Deeply checkered handle is shaped to fit the hand.
6. **COMPACT** • Five-inch spread of control wires is ideal for controlling all planes.
7. **NEW REEL DESIGN** • Assures level winding.
8. **LIGHTWEIGHT** • Only 11 ounces complete.

Originated by Jim Walker and patented in the U.S. and Canada. Other patents pending.

$7.50

Complete with 150-ft. aircraft steel control wires (plated).

If dealer cannot supply, use coupon below.

● *Watch for announcement of Jim Walker's NEW GAS TANK for U-Control stunting. Positive fuel feed in any flight position.*

Jim Walker A-J AIRCRAFT CO.

1166 N.E. 31st Ave. Portland 12, Ore.

Dept. MC

Enclosed find check or money order for $7.50 for one U-REELY CONTROL.

Name.....
(Please Print)

Address.....

City..... Zone..... State.....

SUSQUEHANNA TRACK

(*Continued from page 51*)

all of New York State. The Exchange Club of Binghamton got together with a group of race car enthusiasts and started a movement that has all the earmarks of definite success. They, the Exchange Club, wanted to promote a Hobby Park, where all types of hobbies could be enjoyed by the hobby fans in this locality.

After several weeks of meetings to get the necessary requirements of such a park and making necessary contacts with the proper officials, some action was taken. The officials of the Tri-Cities airport in Endicott decided that they had some extra land which was of no use to the airport as runways and this same land could be used as a Hobby Park. Money has already been set aside for the construction of our future racing track. Outside of the model cars, there will be space for all types of model airplanes, including circles for control line models. When sufficient interest warrants it, there will be a new pool built for model power boat fans.

Getting back to the race car end of this fine deal, there will be a 105-ft. track, 1/16th mile size, which we believe to be the first one of that size here on the East Coast. The surface will be of concrete, with sufficient pit space for almost any number of entries. Also available at the track, will be several bunks for those who must travel long distances to attend the races and require a bed for the night. The boys promise to do their utmost to make this track the best in the East. They do urgently need a boost in membership to put over this deal, so what do you say fellas—anyone in this district should make contact immediately with Dave Reed, Jr., Box 11, Vestal, N. Y. Phone Endicott 902J.

SALINA, KANSAS REPORTING

RACING results for Aug. 4th were of the ordinary, with everyone trying hard to squeeze more speed out of their hot iron. "Corky" St. Clair finally poured some of the old bolts and junk out of his "iron" and finally has it on the upgrade for speed. Al Goedde is still battling the Diesel problem. Speeds for the day follow:

	SPUR	MPH
J. Addison,	McCoy-Hornet	104.65
R. Cross,	McCoy-McCoy	102.97
A. Goedde,	McCoy-Hornet	102.50
E. Vernon,	McCoy-Hornet	102.27
C. St. Clair,	Matthews-McCoy	99.11
F. King,	McCoy-Hornet	96.77
Lt. Schneck,	McCoy-Hornet	96.25

Several fellows with the highest speed cars were absent on Aug. 11th, but the racers were walking right on each others heels, trying to get out in front. Fred Magee, just back from service, was out with the cob-webs dusted off his Matthews and was trying out the track which was built during his stay in service. Fred is one of the original members and is most welcome back at the club. The only eventful occurrence of the day came when R. Cross was coming in on the last lap of his third heat. He lost the trailer wheels of his McCoy-McCoy, caused by the rear

body bolt working loose at a speed of roughly 99 MPH. That crash wall and timer house surely looked good at this point. The rear axle with the wheels went down under the crash wall and ended up against the timer house. Brother, there were several unwanted kinks in the axle, but Cross will be sure to have them out and going next week. Good sport that he is, he came back to the pits smiling in spite of his troubles.

SPUR GEAR	MPH
Al Goedde, McCoy-Hornet	102.97
R. Cross, McCoy-McCoy	99.77
C. St. Clair, Matthews-McCoy	99.55
J. Barrett, McCoy-Hornet	98.46
F. Magee, Matthews-Hornet	98.46
Lt. Schneck, McCoy-Hornet	97.61
C. McCollam, McCoy-Hornet	84.90
PROTO	
P. Brooke, Dooling-McCoy	91.64

It is rumored (*and keep this under your hat!*) that Joe Addison and Everett Vernon went out early on Labor Day and scrubbed the track for better traction. "Not so dumb, boys—you did it real early so the wife wouldn't see what a good job you did!" With everything set for the big day, 29 cars were entered for some fast going, with eight trophies to be awarded plus merchandise prizes for 2nd and 3rd places. Again, old man weather fouled them up, with only one racer making his first heat before the rain took over. But you know how hard it is to keep a good man down, particularly those grand guys from Kansas City. Just as soon as the sun broke through, the track surface was dried and things started to buzz. Before the track was completely dry, a few boys buzzed around at the slippery speed of 45 MPH! The motors were really turning up, though the drive tires looked more like saucers. George McKee from KC turned in 81.7 MPH with his beautiful home built proto weighing 7 lbs. Bill Kaiser, who had never run his McCoy-McCoy over 85 MPH on their rough track back in KC, turned in a speed of 104 MPH. The boys all had lots of fun, despite wading around knee-deep in mud. About two hours of racing was in order and the Salina Club did very little racing to allow the out-of-town racers a good chance at the track. Wayne St. Clair did a masterpiece by acting as cable master, while Corky St. Clair kept his shoes dry so he could act as horser for the racers. After a short huddle, it was decided to postpone the meet until Sept. 15th, at which time all entries agreed to return and if possible bring more cars and new entries.

The following Sunday, with things somewhat dried off from the previous meet, the boys showed up for a day which caused considerable twisting of the old needle valve and much head scratching. Temperature change is something that keeps the boys guessing in this part of the country. One weekend it will be 100° in the shade and the next will only be 70° and this keeps the racers busy.

SPUR GEAR	MPH
J. Addison, McCoy-Hornet	103.68
A. Goedde, McCoy-Hornet	99.77
F. King, McCoy-Hornet	99.00
R. Cross, McCoy-McCoy	99.77
R. Goedde, McCoy-McCoy	95.23
C. McCollam, McCoy-Hornet	89.64
PROTO	
P. Brooke, Dooling-McCoy	87.80
B. Preston, Dooling-McCoy	81.81

FLINN'S

SUPPLIES THE CREATIVE MODEL BUILDER

Model Motors

Arden	1-P-099	C and C	$19.50
Arden	1-B-099	C and C	22.50
Arden	1-P-199	C and C	23.50
Arden	1-B-199	C and C	26.50
Bantam	.199		18.50
Ohlsson	.230		16.50
Bullet	.240		12.75
Melcraft	.290		18.50
Forster	.290	C and C	24.75
Delong	.300		19.50
R.B. Special Ball Bearing	.300		32.50
Dennymite	.570	C and C	17.85
Rocket	.450	C and C	22.50
Fleetwind	.600	C and C	24.75
Ohlsson	.600		18.50
McCoy	.600		35.00
Aircraft or Race Car Type			
Hornet	.600		35.00
Aircraft or Race Car Type			

Also a Complete Line of Model Planes and Accessories

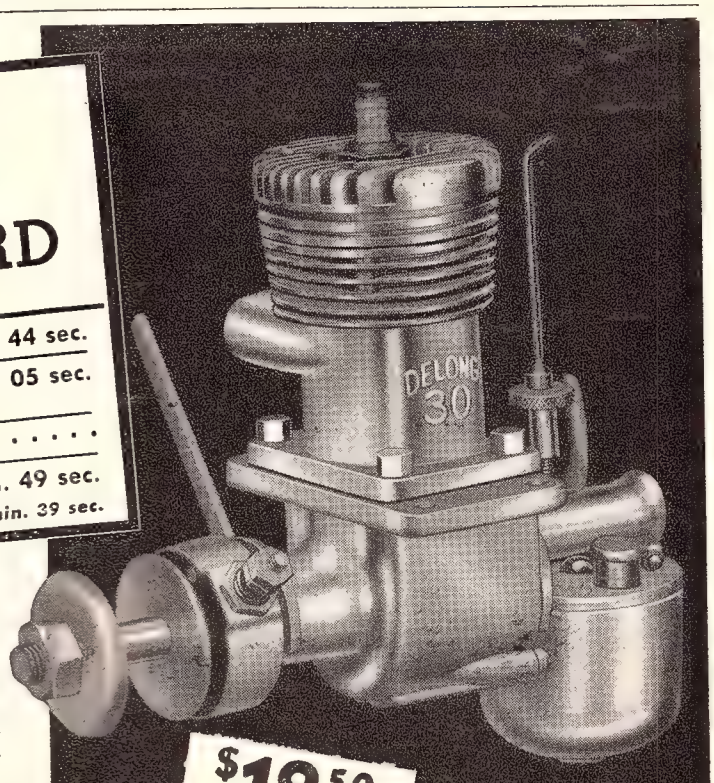
Flinn's

MODEL HOBBIES
814 LIBERTY AVE.
PITTSBURGH 22, PA.

NEW OFFICIAL RECORD

FREE FLIGHT CLASS "B"

1st FLIGHT . . . . . 35 min. 44 sec.
2nd FLIGHT . . . . . 21 min. 05 sec.
(LOST OUT OF SIGHT)
3rd FLIGHT . . . . . .
TOTAL TIME . . . . . 56 min. 49 sec.
AVERAGE TIME OF 3 FLIGHTS . . . 18 min. 39 sec.



Powered by a **DELONG "30"**

At the Michigan State Meet, Battle Creek, Michigan, on July 28, 1946, a new free-flight record in class "B" (1946 rules) was made by a plane powered by a DELONG "30". As shown above, average time per flight was 18 minutes, 56 seconds. This is *one* record—the single flight of 35 minutes, 44 seconds is *another* record.

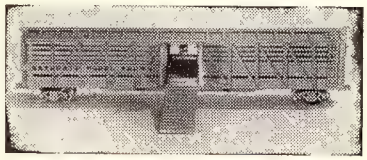
In meet after meet, Delong "30"s are taking planes into the money in free-flight and control line flying. Get in the money with your ship, power it with a Delong "30".

$19.50 at your dealer's

SUPER MOTORS, INC. • 2095 East 19th Street, Cleveland 15, Ohio

BATHGATE HO CIRCUS

Start YOUR H O CIRCUS Today!



CIRCUS BUNK CAR KIT $2.50
70 ft. CIRCUS STOCK CAR KIT $3.50
72 ft. CIRCUS FLAT CAR KIT $2.25
CIRCUS PERSONNEL COACH, Reg. $3.00
CIRCUS OPEN END COACH..$3.00

NOTE: All car kits priced with trucks. $1.00 less if trucks not wanted. Circus colored lacquer in each kit.

WAGONS: Cage, Pole, Baggage .....75c ea.
Water Tank, Calliope, Giraffe, Reserved Seats, Grand Stand Seats, Property Wagon $1.00 ea.
Band Wagon $1.25
Set of Musicians for seats atop the Band Wagon .....$1.50 per set
Draft Horses for pulling wagons .....50c pr.
Drivers or Helpers, Lions, Tigers .....15c ea.
Walking Clowns, Standing Clowns.....15c ea.
Ring Masters .....15c ea.
Camels, Giraffes .....40c ea.
Parade Elephants, Performing Elephants 50c ea.
Cowboys on Horses .....40c ea.
Girl Spectacle Parade Riders and Horses ..40c
Bareback Girl Rider and Horse 35c
2 Girl Tightrope Act (with Tightrope Plan) 35c
3 Girl Trapeze Act (with Trapeze Plan) ..50c
Performing Horses Act (2 posed horses, girl rider and girl trainer) 90c
Balking Mule and Clown (comical act) ..40c
CIRCUS RING, solid casting 42 scale ft. in diameter 35c

NEW! NEW!
LIBERTY HORSES ACT..$1.75 set
Four beautiful Liberty Horses with four pedestals and girl trainer. A Gorgeous Spectacle Act.

TENTS: MAIN TENT, 3 Pole Top, 154 scale feet wide and 246 scale feet long (with all center poles, ¾ poles, ½ poles and side poles, tent material eyelets, balerings and full size templates with complete assembly and erecting instructions) $3.50

MAIN TENT ENTRANCE MARQUIS $1.25

SIDE SHOW, OR MENAGERIE TENT, 2 pole Top, 136 scale feet long and 104 scale feet wide. With all material, poles, etc. $2.50

SIDE SHOW BANNER LINE showing all the freaks and curiosities on colored banners, with plan for ballyhoo platform and ticket boxes $1.25

Send 35c for booklet BUILDING A MINIATURE CIRCUS AND COMPLETE CATALOG. Tells step by step how to build a complete HO Scale Circus. See BATHGATE CIRCUS ITEMS at your Dealers TODAY. If he does not have them yet, we will ship direct on receipt of remittance plus 10c per Wagon, Car or Tent Kit to cover packing and handling. Figures and acts sent postpaid.

Fabricated Products Corp.
30 Main Street East Orange, N. J.
Export Agents: The Sealand Co., 135 Front St., New York 5, N. Y.

TINPLATE TRACK

(Continued from page 25)

and 3260 locomotives with a "steel" frame, pictured as identical in design to the die cast frame known to have been used on the 3260 in 1929 and 1930 (the 3254 was not made after 1928). Ives frame changes from cast iron to steel, or steel and iron, or steel and die castings, or to all die cast, are numerous and confusing in this period. Does any reader recall or own a 3254 or 3260 with an all steel frame, or was "steel" an error on the part of a 1928 catalog copywriter?

4: This is not a problem of whether something was made, but just w*hen it was first made.* The model in question is the first Ives locomotive, which we know was a trackless tin clockwork model. When the first Ives train was made has always been an extremely important question in tinplate history. Some Ives fans were under the impression, from the catalogs of the 1920's, that Ives had always made trains and must have started making them in 1868 when they were founded. Later and more detailed study indicated that this was not correct. We will shortly endeavor to answer this question as accurately as possible, when we discuss these models in full, but as will be seen then, the exact year is still not definitely established.

5: Who made the first electric train? This is a question that still intrigues and puzzles, and one for which the answer does not yet seem in sight. So far, the earliest we have managed to trace them back is to Carette in 1893, but it would appear that there is much more to be done on this matter.

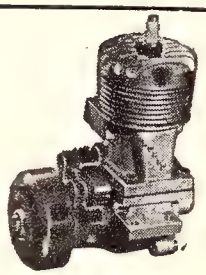
6: What year was the first Knapp train made?

Mr. Knapp, when questioned on this point at length a few years ago, recalled the date of his first electric train as either one year before the New York Central Railroad put their first electric locomotive into service or the year they inaugurated electric service out of Grand Central Terminal. The first NYC electric locomotive was built in 1904. Regular service was started in 1906. This leaves a lee-way of several years, and it has always been thought, for various reasons, that 1904 was the earliest possible date, the engine built that year probably not being put into use until 1905. Recently, however, Don McClain turned up an early Knapp train, which the owner claims to have received in 1903.

Here then, are six of the most intriguing problems that remain. The list could perhaps be extended somewhat, but those mentioned would remain the chief points of interest. Perhaps some will be solved as result of this listing; for our part, having enumerated them here, we will redouble our own efforts to furnish satisfactory solutions, so that perhaps in the not too distant future we can relist them, complete with their answers.

More New Developments

More products for post-war tinplate model railroading continue to appear. The latest is a new type of flexible track, suitable for use with regular 0 gauge tinplate track, 0 gauge "027" height track, or the new American Flyer ⅞" gauge track. This new track, which may be curved into any shape, employs a flexible strip metal rail, the head of which is rolled into a round shape to conform to that of regular 0 gauge sectional track. This head has slots cut into it at very short intervals, so that it may retain the normal flexibility of the strip rail. The lower portion of the rail, which is simple strip metal, fits into slots sawed the proper distance apart in wooden ties, similar to the method used on the earliest electric train track many years ago. There are five slots in each tie and three sections of rail are supplied with



$35.00
"HOBBYCRAFTS"

HORNETS AGAIN!

60-RC FOR RACE CARS
60-B FOR BOATS
60-A FOR PLANES
ORDERS NOW BEING FILLED
Western Dealers Write for Discounts
We Specialize in Race Cars and Racing Motors
1327 JAY ST., SACRAMENTO, CALIF.

each box. For 0 gauge track with inside third rail, the two outside and center slots are used, while for ⅞" gauge two-rail track, a rail is inserted in each of two other slots, properly spaced for this gauge. The track is manufactured by the Leganger Bryant Co. of Chicago, and is sold in boxes containing the material for 87½" of three rail track. An assortment of track pins for connecting the L.B. track with various other types is supplied in each box.

From a correspondent in France, M. Henri Girod-Eymery, co-editor with Jean Falaize, of the railroad and model railroad magazine, "Chemins de Fer," comes word that a new line of HO gauge tinplate is now being manufactured in Belgium, from Belgium Railways prototypes, and that two or three firms are now making tinplate, mostly 0 gauge, in Switzerland. We are endeavoring to obtain further information on these new entries into the ranks of the industry, and will present the details here as soon as we are able to do so. "Chemins de Fer," incidently, recently ran a feature article on model railroading in the United States, mentioning the existence of a great number of "amateurs de 'tinplate'" and the American periodical, "Le 'Model Craftsman'" which covers the diverse "activités modellistes de marine, d'aviation et de chemin de fer."

STEAM ENGINE

(Continued from page 40)

the sides screwed in, so that they ride in the slots in the eccentrics. This will keep the connecting rods from slipping off the eccentrics. The valve rods are then fastened to the connecting rods with the other two 4-40 hex bolts. Now you can start to set the slide valves.

Loosen the set screw in the collar on the valve rod and turn the crankshaft until the valve rod is all the way up. Now move the slide valve up until the lower intake port is entirely uncovered and tighten the set screw in the collar. Turn the crankshaft over to see if the slide valve uncovers the upper intake port at the bottom of the stroke. Do this to both slide valves and then mount the covers on the steam chests. This will complete the assembly of your steam engine.

When trying out the engine, take the model to your local garage and run it on compressed air. The garage operator will probably be so interested, that he will allow you to run it all day!

HO **You Dreamed About It OO**

7 POLE—DC—PER MAG—BALLBEARING MOTOR, wound AS IS for 27 V., gov't surplus, turns over on 6 V., has strong power on 12 V. Remove governor on one end and you have a double end shaft with room for flywheel on both ends. Ideal for operating and loco, swell for driving two M.U. units at same time. Fits all gauges, now running an H.O. Birney car. Specify No. 404 when ordering.

AC-DC, 120 RPM motor, same armature and bearings as above, but has gear reduction box that is easily removed by you AC current users if you want a good loco motor. AS IS, ideal for turning turntable, operating bridges and all moving scenic effects. Very strong on 6 V., you can't hold it on 12 V. Specify No. 202 when ordering.

PRICES:

$2.00 ea., $1.90 ea. for 6, $1.75 ea. for 12

Precision Ballbearings ⅛ ID x ⅜ OD x 5/32 wide, 35c ea., 3 for $1.00. Prices on smaller sizes available.

TERMS: Cash or check with order—NO C.O.D.'s (add 5% on orders less than $5.00 for pp)

Combine both motors to get the low price.

Sold by a Model Railroader

P. V. FLANAGAN

178 Inglewood Dr. Rochester 11, N. Y.

O Go all the way, Join the N.M.R.A. S

(List of many surplus items for 3c stamp.)

THIS IS IT . . .

IT'S WHAT YOU Want - IT'S WHAT YOU Need

2.35 AT YOUR HOBBY SHOP

VITAMITE

GREATEST MODEL STORAGE BATTERY
PRECHARGED . . . RECHARGEABLE
WORLD'S SMALLEST WET CELL
WEIGHS ONLY ONE OUNCE

VITAMITE'S LIFE SPAN IS EQUIVALENT TO THAT OF 400-AA DRY CELLS . . .

LEAK-PROOF

VITAMITE, world's smallest WET CELL—One-piece plastic case is acid-proof, transparent, non-inflammable. Get VITAMITE WET CELLS at your hobby shop.

WORLD'S SMALLEST WEIGHS JUST ONE OUNCE

VITAMITE, world's smallest WET CELL, makes space available where needed . . . It's 2¼" (overall) HIGH, ⅞" WIDE, ½" DEEP—Weighs 1 ounce. Get VITAMITE WET CELLS at your hobby shop.

NON SPILL

VITAMITE, world's smallest WET CELL, has special SAFETY CAP which prevents spilling during short upside-down flight or upset. Get VITAMITE WET CELLS at your hobby shop.

PLATES

PRECHARGED . . . RECHARGEABLE

VITAMITE, world's smallest WET CELL, has same type of formed, precharged plates as used in auto battery. Get VITAMITE WET CELLS at your hobby shop

CHARGE GAUGE

Inclosed INDICATOR shows charge and discharge point—Get VITAMITE WET CELLS at your hobby shop

POWER

VITAMITE, world's smallest WET CELL

2.2 Volts—more than sufficient current for a FULL day's flying on one charging. Get VITAMITE WET CELLS at your hobby shop.

CONTINENTAL PRODUCTS CO.

227 WEST 64th STREET NEW YORK 23, N. Y.

TINY POWER

LIVE STEAM LOCOMOTIVES Built to Order!
(¾"—1"—1½" scales only)

We will also machine any part or parts for these that you may be building.

We have ¾" scale trucks!

Send a dime for our circulars on stationary steam engines, boilers and complete plants, Ready-to-Run.

Custom machinists for the live steam modeler, 22 years experience.

Chas. V. Arnold Philomath, Oregon

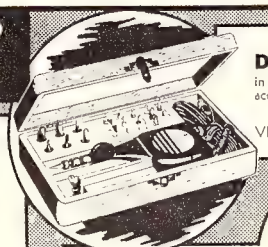
PERMAG POWER

12 volt D.C. Motors for Model Locomotives
D.C. Voltmeters and Ammeters
Sectional Panel Boards and Accessories
See your Dealer or Send 3c stamp for Catalogue B

"THE BETTER KIT IS PITTMAN EQUIPPED"

PITTMAN ELECTRICAL DEVELOPMENTS CO.
West Park Avenue Sellersville, Pa.

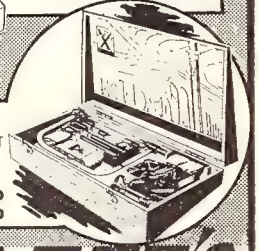
A TOOL SHOP IN YOUR HAND



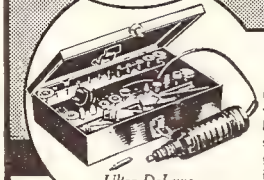
BURGESS
DeLuxe Vibro-Tool
in handsome, hardwood case with accessories for wood, leather, glass
$16.50
VIBRO-TOOL only . . . $7.50

DREMEL
DeLuxe
Moto-Tool Kit
Complete with 23 accessories in beautiful hardwood case
$23.50
Moto-Tool with 1 emery wheel point
$16.50

DREMEL
DeLuxe



X-ACTO
No. 85 DeLuxe TOOL KIT AS ILLUSTRATED
$12.50
No. 84 Tool Kit . . $7.50
No. 83 Knife Set $5.00



Ultra DeLuxe
HANDEE
in steel carrying case with 31 accessories for grinding, drilling, sawing, carving, engraving, cutting, polishing all materials
$27.50

Ultra DeLuxe
HANDEE

BILLETT'S HOBBYCRAFT SHOP

2548 NICOLLET AVE., MINNEAPOLIS 4, MINN.

Order Now! Immediate shipment on all hobby items advertised in this magazine. We pay the postage on orders $5.00 and over. Our specialty - prompt service on all the latest and 'hard to get' merchandise Buy from us for complete satisfaction

"S" Gauge LOCO PARTS

TRUCKS • CARSIDES • TRACK

So many "S" gauge enthusiasts have been clamoring for C-D locomotives, freight cars, and track material that we have decided to offer those parts which are NOW AVAILABLE, rather than wait until we can announce the complete kits. The loco parts available, comprise most of the vital components of our 0-6-0 Pennsylvania Switcher. The few simple missing parts can be added later, or improvised in your own workshop.

WRITE FOR DETAILED LIST

of Highly Detailed Die Cast CHASSIS PARTS, Accurate Brass Stamped VALVE GEAR PARTS, Precision Wood Turned SUPER-STRUCTURE PARTS, Lettered, Scribed and Embossed BOX CAR SIDES, Lettered, Scribed and Embossed COLORFUL REEFER SIDES, Freight & Tender TRUCK KITS, Complete Line of TRACK MATERIAL and many other hard to get items.

DEALERS:

Our complete loco car kits will be ready soon for distribution through your shop.
Add 20c on each order for Postage and Packing.

CLEVELAND

MODEL & SUPPLY CO.

"Pioneer Manufacturers and Model Engineers Since 1919"

4512K20 LORAIN AVENUE CLEVELAND, OHIO

MILLER *the Real Thing* in POWER TRUCKS

"S" gauge Diesel switcher truck shown. To be available in several other types in the leading gauges. Direct drive, high torque per-mag motors, single or twin, mounted within truck frame, entirely below floor.

The ROBERT L. MILLER LABORATORY
902 N. Washington St. Valparaiso, Ind.

S Gauge is the Practical Size
FOR EASY MEASUREMENTS IN INCHES

ASSOCIATED "S" GAUGE MANUFACTURERS

Rm. 444, 20 N. Wacker Dr. Chicago, Ill.

Send 10c for descriptive circular containing "S" gauge standards, clearance chart and scale rule.

MIDGAGE MODELS

3/16" SCALE

PASSENGER TRUCK KITS

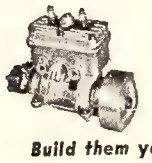
Commonwealth 4 Wheel High Speed Fully Sprung Passenger Truck Kits **$2.85**

REMEMBER!
MIDGAGE MEANS "S" GAUGE

Conforms to 19 NMRA 46 Standards

If possible, BUY FROM YOUR LOCAL HOBBY DEALER. Help him to be of service to you. Write for circular containing scale rule, clearance chart and buyer's guide. Add 10% on mail orders for handling and postage.

MIDGAGE MODELS, INC.
P. O. Box 1044 Portsmouth, R. I.



MINIATURE ENGINES

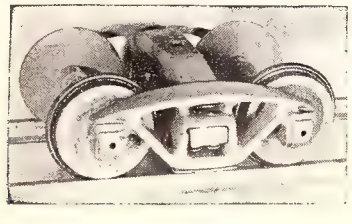
Gasoline—Steam
Air—Locomotive

THE WORLD'S MOST FASCINATING HOBBY

Build them yourself — In your own shop With your own tools

Send 10 cents for my illustrated catalogue listing the world's largest selection of miniature engine castings and drawings.

WAYNE MILLER
Suite 200E
Engineering Bldg., Chicago 6, U.S.A.



½" SCALE FREIGHT TRUCKS

Sprung bolster, bronze side frames and bolster, C. R. steel wheels and axles.

$12.50 per pair

(4- and 6-wheel passenger and streamline trucks later)
See your dealer or order direct

Howard Bros. Models
205 W. Bonita San Dimas, Calif.

NEW TINY POCKET SIZE RADIO!

Slips in your pocket or purse —Wt. only 3 ozs.! Complete, READY TO PLAY as shown with self contained phone for personal use. Beautiful black silver plastic case. Has patented fixed Crystal-Slide Tuning Dial. NO TUBES, BATTERIES OR ELECTRIC PLUG-IN REQUIRED. USUALLY RECEIVES LOCAL BROADCASTS without outside aerial wires.

GUARANTEED TO WORK

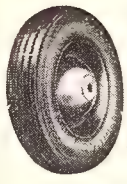
when connected and used according to instructions or your money back. 10 day trial. Can be used in homes, offices, hotels, cabins, in bed after hours, etc.

Send Only $1.00 (cash, money order, check) and pay postman $3.99 plus delivery fees on arrival or send $3.99 for postpaid delivery. IDEAL GIFT FOR CHILDREN OR ADULTS ALIKE! Get your PA-KETTE RADIO NOW for real enjoyment.

(All Foreign Orders $5.00 Cash with order)
PA-KETTE ELECTRIC CO., Dept. MC-10, Kearney, Nebr.

BUILD YOUR OWN

SCOOTERS . . . RACERS
CARTS . . . . COASTERS



Easy with WALTON WHEELS

America's finest, smoothest, fastest riding wheel! Has Jumbo puncture-proof rubber tire—built-in air cushion —sturdy steel hub—roller bearings. Fits any ½" axle. Ideal gift for homecraft or for industrial use. Completely assembled.

BEAT 'EM ALL—Win races. Be top speed king of your neighborhood. Walton DeLuxe Wheels put you out in front—you roll faster, smoother, pick up speed as you roll ahead. Get started now. Order today. Send check, money order (or C.O.D.).

8 x 2	$ 2.95 each	set of 2
8 x 2	$11.60 each	set of 4
10 x 1.75	$ 3.25 each	set of 2
10 x 1.75	$12.80 each	set of 4
10 x 2.75	$ 7.49 each	set of 2
10 x 2.75	$29.95 each	set of 4

WALTON WHEEL CO., Dept. D
Plankinton Building Milwaukee 3, Wis.

MODEL CHURCH

(*Continued from page 26*)

Glue a strip of balsa or basswood along the sides for gutters or try splitting a soda straw if you prefer the old-fashioned metal type. The drainpipe is some thin doweling.

The church is now ready for the painters and here we suggest using poster paints as they dry quickly leaving no brush marks and no gloss. Two thin coats is better than one heavy coat. My model was painted cream with white trim but suit yourself as to colors. In HO, it is advisable to score under a portion of the siding to make them stand out better.

The small porch out in front is very simple to construct, likewise the stoops by the various doors. Windows are up to you and how much patience and talent you possess. If you are a second Michaelangelo, paint yourself some stained-glass windows otherwise use anything from colored celluloid to Xmas card scenes. If your parish is hard up for money, use plain glass windows.

Well sir—we're just about ready to hold a service on your pike. Of course, it won't look quite right until you put the church on a nice plot of ground and do some landscaping.

DAYTON CLUB HOLDS FIRST MEET

THE Dayton Miniature Racing Car Club of Dayton, Ohio, held its first race of the year on July 14th, at their own track located in Island Park. With the showing at this race, the boys anticipate great things for the future. Harrison's car was run by H. Keane and M. Eberhart's two cars by J. Eberhart.

C. McQueston has a track in his own back yard at College Corner and anyone interested may use it for racing.

SPUR GEAR

	MPH
L. Wallace, Indianapolis, Ind.	97.19
J. Wilson, Anderson, Ind.	94.24
K. Smith, Indianapolis, Ind.	91.34
C. Mooney, Columbus, Ohio	89.91
D. Wilson, Anderson, Ind.	89.73
M. Eberhart, Troy, Ohio	85.79
C. Mooney, Columbus, Ohio	84.58
L. Weisenborn, Brookville, Ohio	80.78
C. Wilson, Anderson, Ohio	78.94
W. Weinmain, Hamilton, Ohio	77.38
C. McQueston, College Corner, Ohio	77.12
A. Gill, Hamilton, Ohio	No Time

PROTO

H. Harrison, Plainfield, Ind.	93.36
R. Chandler, Dayton, Ohio	69.33
M. Eberhart, Troy, Ohio	29.41

WESTBROOK
"O" Gauge

FREIGHT CAR KITS
with
SIDE PANELS PAINTED AND LETTERED

Send for Illustrated List of Complete Kits and Hardware Parts—6c Stamps—Please

The Westbrook Company
Hasbrouck Heights, N. J.

HI HO, COME TO THE FAIR

THE famous Minnesota State Fair, Aug. 24th to Sept. 2nd, has been stepped up in 1946 and succeeding years by the addition of the "Little Indianapolis Speedway," a seventy foot concrete track, three feet wide. This track is being installed by the Twin City Model Race Car Club, according to Joe Stariha, Pres.

On the front of the property will be installed four concession stands for hobby dealers and jobbers, the group to be called "Hobbyland." Visitors to Minnesota are invited to race with the boys. The purpose of this track is to raise funds to build a rail track for 1947.

Officers for 1946 are Joe Stariha, Pres., 1186 W. 7th, St. Paul; H. Lund, Treas., 1159 W. Central, St. Paul; W. Wilson, Sec., 661 University, St. Paul; Lytton Calrow, Corr. Sec., 593 N. Snelling, St. Paul.

Top speed for the year at the Model Airport track is 94.76 MPH held by Wm. McClintock, of St. Paul.

WHITE SETS RECORD AT SAN LEANDRO

SAN LEANDRO Model Race Car meet held on July 4th and 5th was most successful, with Wilmer White, of Ontario, Calif., setting a new record with his fast Cliff Fox proto (Jackass Skull), powered with a McCoy motor, for a quarter mile in 8.47 seconds or 106.25 MPH. White has consistently broken records with his Fox car. Harry Miller, Jr., and Chuck Lee, of Bell, California, introduced a new class of car which is designed after the "Hot Rod" Fords, which are run every Sunday on the Dry Lakes of California. The contestants all expressed their intentions of purchasing one of these "Widgets" and entering this class where the fun is racing and not "speeding"! These cars are driven by spur gears and offer a good deal of fun in dolling them up to resemble a real hot rod car. White ran one of these new cars and proceeded to establish a new record in this class with 81.37 MPH for the quarter mile.

Due credit should go to Ronald Smith, Pres.; Art Miller, Sec., and Ray Hook, North Calif. IMRCA Director, and to the Race Committee, H. Stackhouse, D. Keshishian, C. Fox and F. Jenkins, for

POLK a DOTS — October

ATTENTION owners of scale and Tinplate layouts! These are just the cars for getting around those sharp radius curves. Scale in detail, realistic in appearance. This is the answer to owners of Tinplate who have been wanting to build a passenger train. Accurately cut parts from flawless wood stock. Discarded tinplate trucks may be used. OPEN or CLOSED END COACHES, BAGGAGE and COMBINATION cars .....each $3.95

NEW—DIFFERENT—PERFECT! ¼" Scale Building Material! Accurately embossed on wood sheets 4" x 18". Coloring is perfect. Anyone can easily distinguish bricks from building blocks, shingles from tiles, paneling from siding. Sold in units of 2 sheets, totaling 36 inches.

Tile roofing ..... .90
Shingle (blue, green, red or brown).... .80
Brick, white or black mortar ..... .80
Cement Block, White .70
6" or 12" white siding .70
Paneling white or pine .70

Track layer $1.50
Track layer spikes, approx. 1500 .....60c
Switch throws 75c
Brass fish plates doz. 10c
Die-cast figures — Set 9 passengers 40c
6 piece baggage boxes, etc. 25c
STAR LINE truss bridge kit $1.75
PLATFORM LAMP POSTS add realism as well as illuminate station activity. Beautifully colored in black and white detail. Sockets take 6, 12 or 18 volt miniature bulbs. Wires extend down through table for concealment.
Single arm model...$1.25
Double arm model .. 1.75
SCENERY, Beautiful full-color litho background paper sheets, 22" wide by 5½ feet. Foregrd. Village, Bkgrd. Mountain 59c
Quik-lay track 24 feet, O-Gauge $7.00
Folded steel rail—99 feet express collect)...$6.75

At the time this ad is written, all items listed are in stock, ready for immediate delivery. In ordering, include 10% additional for packing-postage on orders for less than $5.00. For orders over $5.00, include 5% for p.p. On orders over $5.00, a beautiful 12" x 18" full-color locomotive illustration will be included FREE, if requested.

Scalecraft all-metal freight trucks $1.95
Brass fishplates, doz. 20c
Scalecraft couplers pr. $1.00
Scale automatic couplers, pr. 85c
Auel tinplate trucks—assembled pr. $1.95; unassembled ...pr. $1.65
Tenite wheels (2 wheels on axle) 10c
New O Gauge Track Layer of chrome-hard steel; gauges & spikes in one operation. Uses regular off-set head spikes $3.00
Spikes for above track layer .....¼ lb. 50c

ELECTRICAL SUPPLIES

MMK (Motor Modification Kit). Don't discard your 6-volt motors because everything is now 12 volts! *Re-wind 'em!* Kit contains necessary wire and easily understood instructions, 55c
POWER PACK, with dual output: 15-volt ac for lights, switches, etc., and 12-volt dc for operating locomotives. Ample power for the average HO layout with 2 or 3 locos. Has built-in ON & OFF switch, and circuit-breaker, $21.50
U-BUILD-IT POWER PACK. Assemble your own power pack and save money. Parts furnished are: 150-watt, 15- volt transformer, 4-amp. Selenium rectifier, ON & OFF switch, circuit-breaker & simple instructions $15.75

POWER PACK SUPPLIES:
Choose from the following a Selenium rectifier which can be combined with any train transformer of 75 watts or more to build a power pack for your layout. Each rectifier comes with wiring instructions.
24-amp., rect. $24.00
12-amp., rect. 16.00
8-amp., rect. 12.00
4-amp., rect. 7.50
Famoco OO Motor, 5-pole 12 v ac/dc ..$5.95
A powerful Permag motor operates on 6 to 27 volts dc. Has 7 pole balanced armature. Ball-bearing equipped. Current drain only 1/5 amp. Enclosed gear reduction produces high torque at 250 rpm. A perfect power source for O gauge. Overall length 2¾"; dia. 1¼"; shaft dia. ¼" $4.50
25 watt transformer for above motor. Has 7½ & 15 volt taps... $3.25
Selenium full-wave rectifier. May be used as bridge for universal motors, or combined with above transformers to make a powerpack for the Permag motors listed above $1.50
Electra switch machine (all-gauge) $1.25
Electra contact points, 35c
Circuit breakers, 5 amp. ea. 50c
Miniature base bulbs—2.5 v. red, green, blue, amber, clear, ea. 45c; 6 v. red, green, blue, amber, clear, ea. 45c; 18 v. red, green, blue, amber, clear, ...ea. 50c
Sockets .. .... 4 for 25c
Train bulbs (flashlight base size) 12 v. red, green, blue, amber, clear ... ... ea. 25c
18 v. large globe—all colors & clear.....ea. 25c
18 v. min. globe—red, green and clear, ea. 30c
Sockets for above bulbs 4 for 25c

DEALERS
We have thousands of model railroad items, consisting of staples, pre-war and every new postwar product that has reached the market. Our two centrally-located supply sources are geared for fast service with the economies of centralized buying.
IT PAYS TO BUY from POLK'S

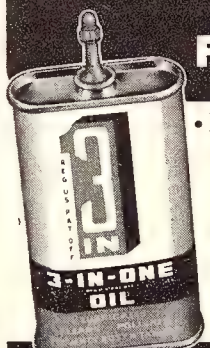
MODELERS: Order from Dept. MC10, New York address

POLK'S MODEL CRAFT HOBBIES
314 Fifth Ave., New York 1 — 231 S. Wabash Ave., Chicago 4

Something NEW! THE PLASTICOR! Plastic Injection Molding Machine! Molds Toys, Jewelry, Novelties. An excellent Xmas Gift. Send name for complete details to:
GRAY MODELS, Dept. MC
P.O. Box 1234
Syracuse 1, N. Y.

GARGRAVES UNIVERSAL
O & 027 Gauge Track (Patented)
SCALE, HI-IRON OR TINPLATE
Make curves, etc., as you wish. NO SPIKES. NO Gauges. No special tools. Circular for stamp
GARDNER, "THE TRAIN DOCTOR"
Lionel Factory Approved Service
2261 Dewey Avenue Rochester 13, N. Y.

A TOOLSHOP IN YOUR HAND!
Smooth, steady power at your fingertips! Handee grinds, drills, polishes, cuts, carves, sands, engraves — works on metal, alloy, plastic, wood, horn, bone, glass, etc. 25,000 r.p.m. AC or DC. Wt. 12 oz. In steel case with 45 accessories, $27.50. Handee with 7 accessories, $20.50
HANDEE TOOL OF 1001 USES
FREE! New 52-page MANUAL
A FINE GIFT FOR A FRIEND OR YOURSELF
CHICAGO WHEEL & MFG. CO.
1101 W. Monroe St., Dept. MC
Chicago 7, Ill.

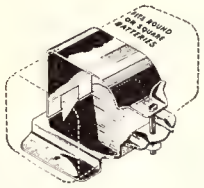
FINE TOOLS NEED FINE OIL!


• Polishes
• Cleans
• Lubricates
• Prevents Rust
SOLD EVERYWHERE
3-IN-ONE oil

BATTERY CLAMP

For GAS PLANES

35c



Made of aluminum, light but sturdy. Securely holds round or square batteries. Bracket mounts anywhere with 2 screws. A useful clamp for many purposes.

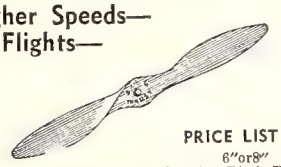
"ELECTRALINE"
INSULATED STEEL WIRE
FOR CONTROL LINE MODELS

$1.50

State Size Desired Diam. .011" or .014" 150 ft. Coil

ELECTRALINE—The first and original insulated control line wire. Perfected to R. L. Webber specifications after 2 years of rugged experimentation. Insulated with a tough flexible rust-proof coating. Attractively packaged with diagrams, electrical hookup and complete instructions for use with Two Speed Control or cutoff switch.

HI-THRUST PROPS
For Higher Speeds—
Longer Flights—

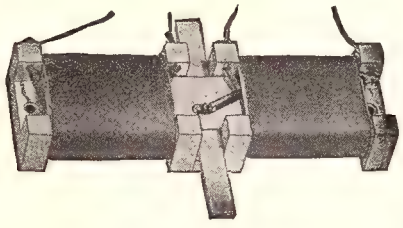


Perfect air-foil section. Sharp, clean edges.

PRICE LIST

Diameter	6"or8" Pitch	10" Pitch
8" or 9"	35c	45c
10"	40c	45c
11"	40c	50c
12" or 13"	45c	60c
14"	50c	65c

ELECTRA SWITCH MACHINES



Simple - Reliable

Here's how to get C. T. C. on your pike in a hurry . . . with switches and signals operated from the control board! **$1.25**

Order from your dealer . . .

R L Webber COMPANY

ORDER FROM 5729-31 WEST LAKE ST. CHICAGO 44

a bang-up job at this meet. The San Leandro Club also thanks the various local dealers for their financial cooperation. Mrs. Harry Stackhouse, better known as Aunt Prunie, put on an act that kept the spectators and contestants in a constant state of laughter. Aunt Prunie had a small "bedchamber" to carry fuel for her spring-wound model race car. Thirty-four trophies and prizes were awarded the winners. Results follow:

PROTO

	MPH
W. White, Fox car	106.25
C. Lamb, Lamb-McCoy car	104.65
D. McCoy, Lamb-McCoy car	104.28
R. Smith, own car	99.33
J. Perrson, own car	92.68
J. Sodeman, own car	91.74
W. Gearhard, Jenkins proto	91.00
D. Millburn	91.00
Al Papina, Papina car	89.19
H. Stackhouse, Papina car	88.14

SPUR GEAR

C. Lamb, McCoy car	110.29
W. White, McCoy car	109.35
D. Keshishian, Thoral car	109.02
E. Hopkins, Dolphin car	108.36
G. Devers, McCoy car	106.76
T. Lessley, Sr., McCoy car	106.00
B. Torrey, McCoy car	105.50
J. Piexoto, McCoy car	105.38
L. Owen, McCoy car	105.14
S. Stewart, McCoy car	104.77

STREAMLINE

H. Stone, own car	96.76
J. Argentine, own car	96.20
C. Fox, own car	93.02
T. Francis, own car	87.04

WIDGET OR HOT ROD CLASS

W. White	81.37
Ikenberry Bros.	79.50
H. Miller, Jr.	78.53
R. Nowell	72.87

HAROLD LOOSE RACE

(Continued from page 43)

between first and third places. Referring to the box score, you can see that these three men would have finished 5th, 6th, and 7th, respectively if they had competed in the regular Proto class. We sincerely hope the AMRCA will take the lead, giving us a set of rules for this particular class as the boys all seem to like it. It is hoped to keep this strictly for manufactured cars only and for the lad who hasn't got a machine shop to work out his own problems—just like the E Class in the Model Power Boats. We want a class for the "Joe" who walks into the hobby store, asks for a race car, goes home and puts it together. Let us have a place for him to race as well as a class where he can compete with others under similar circumstances — the class where if you buy it in the package or in one piece or in kit form, and put it together with only a wrench, screw driver and other simple hand tools, you can compete against others of equal skill. This is more to the thinking of Mr. Loose when the hobby of model race cars started. Clubs should also do more for their members and not run all their races for the benefit of a FEW! Sure—a race is a contest for speed but lets devise other forms of competition to encourage other people to our hobby. Don't just sit back and think about this, and sound off where no one can hear you! Write to the Secretary of AMRCA if you have any ideas at all.

SPUR GEAR

	MPH
Fred Luning, Hornet	118.73
John Jaciow, Hornet	117.04
Jack Thorp, Hornet	112.92
Frank Lunning, McCoy	111.80
Bob Smith, Hornet	109.36
Al Aemez, Hornet	107.78
Ed Rodgers, Hornet	107.66
F. Valeo, Hornet	107.66
J. Kenny, Hornet	107.02
B. Whiteside, Hornet	106.89
F. Pagachnik, McCoy	106.76

PROTO

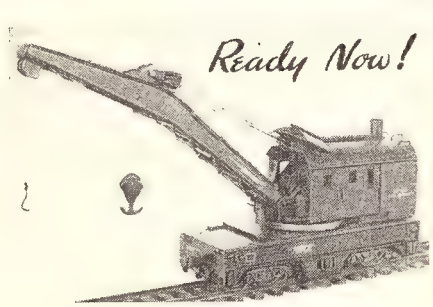
	MPH
R. Deus, Jr., Hornet	104.17
W. Martine, Hornet	102.27
B. Janovics, Jr., Hornet	95.54
P. Carpenter, Hornet	93.36
R. Van Houten, Hornet	75.95
Al Remez, Hornet	72.00
J. Van Houten, Hornet	67.62

PROTO MFG. CLASS

	MPH
K. Passler, Hornet	92.59
T. Ciovanett, McCoy	92.49
H. Frank, Mc Coy	92.31
W. Conners, Mc Coy	90.18
C. Van Houten, Hornet	88.68
N. Raben, Mc Coy	69.61

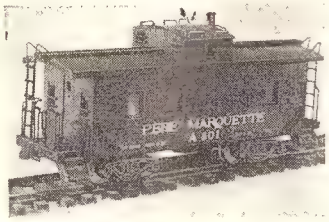
CANADIAN RAILROADERS!
All available kits, parts and supplies can be obtained from your
CANADIAN MODEL BUILDERS' SUPPLY HOUSE
No need to worry about duties, taxes or exchange. Send stamp for details.
Everything in O and HO gauges
BOX 253 BRANTFORD, ONT.

BEST MINIATURE NURSERIES
Ohio's natural growth trees and shrubs—hand tinted for full effect under artificial lighting—See your dealer first.
HO — O
12 assorted O $1.50
18 assorted HO 1.50
Add 20c for postage and packing.
88 HAWTHORNE AVENUE, AKRON 3, OHIO



"HO" WRECKING CRANE
COMPLETE WITH TRUCKS
$2.00 At your dealers—By mail add 15c for postage.

PERE MARQUETTE CABOOSE
$1.75 At your dealers—By mail add 15c for postage.



ALL IDEAL KITS CONTAIN COMPLETELY ASSEMBLED BRASS-WHEEL TRUCKS

SEND FOR OUR CATALOGUE 10c
IDEAL MODELS
19-21 West 18th St. New York 11, N. Y.

OTHER "HO" RR CAR KITS
BOX CARS
Pittsburgh & Lake Erie
Norfolk & Western
Northampton & Bath
Pere Marquette
Bessemer & Lake Erie
Baltimore & Ohio
Pennsylvania Auto Car
REFRIGERATOR CARS
Morrell
Kingan
St. Louis
$1.75 each at your dealers—by mail add 15c for postage

WANT A RAIL TRACK?

(Continued from page 46)

the place and stop. Gate admissions held up during August to net the club, including 22 entry fees of Class B members, a total of $209.73.

If the track were located on a busy highway, we could not begin to handle the crowd, thus it now seems certain that with the track located in even the remotest spot, the club is assured of a two hundred dollar per month return. Figuring a liability insurance policy of $25,000 to $50,000 which cost $100, six months of operation will pay back the loan of the original eleven A members. When this loan is liquidated, there can be prizes and trophies galore, real ones!

With the Class A and B set-up, everyone is happy. The Class A boys do the work and race without fee, while the Class B boys have no work to do and pay their way. They will naturally participate in prizes and trophies when this phase of the game comes around.

Of course you must have cars to run and put on a show, so many of our Class A members have two cars, one streamliner and one conventional. Eight of each makes a nice show of fourteen races for the program. Qualifying starts at 2:00 P.M. and the program is usually completed around 5:30 P.M. ending up with the two feature races of one mile, one for streamliners and the other for the conventional.

Races are run off similar to the midget races. Eight cars participate in three elimination races starting with the fastest qualifying cars. Two winners are taken from each race. This makes six winners who are qualified for semi-final races, the two winners of each qualifying for the feature, leaving two non-winners. This leaves four non-winners for a consolation race. So with eight cars, we run three elimination, two semi-final, one consolation and one feature or a total of seven races for each, streamliners and conventionals, or a grand total of fourteen races. Qualifying or time trials is considered an event on the program so we have fifteen events for the program.

Oh yes, plans—how much do they cost? Well, any club who can furnish some tangible evidence that they are serious about building a rail track, may obtain the plans of the Chicago Midwest track through A. M. R. C. A. at no cost.

Results of August racing follow. Final run-offs only are shown based on the principles outlined above:

AUGUST 4TH—STREAMLINE

	Qual. Time—MPH
C. Rohrer	11.80 — 76.27
J. Thompson	11.72 — 76.79
B. Meskowski	12.10 — 74.36
C. Widen	13.05 — 68.97

AUGUST 4TH—CONVENTIONAL

S. Riff	12.60 — 71.43
J. Thompson	12.29 — 73.23
R. Springfield	13.15 — 68.44
R. Staschke	14.20 — 63.38

AUGUST 11TH—STREAMLINE

W. Weller	11.50 — 78.26
C. Rohrer	11.72 — 76.79
J. Thompson	11.71 — 76.86
B. Meskowski	12.08 — 74.50

AUGUST 11TH—CONVENTIONAL

S. Riff	71.43
J. Rozhon	71.66
J. Thompson	73.23
C. Rohrer	73.35

AUGUST 18TH—STREAMLINE

W. Weller	11.39 — 79.01
C. Rohrer	11.80 — 76.27
B. Meskowski	12.69—70.93
J. Loschiavo	12.47 — 72.17

AUGUST 18TH—CONVENTIONAL

J. Thompson	12.31 — 73.11
S. Riff	14.70 — 61.22
S. Fetzner	14.14 — 63.65
R. Staschke	13.76 — 65.41

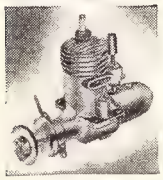
AUGUST 25TH—STREAMLINE

W. Weller	11.35 — 79.30
B. Meskowski	12.13 — 74.20
C. Rohrer	11.95 — 75.32
J. Thompson	11.69 — 76.99

AUGUST 25TH—CONVENTIONAL

C. Rohrer	12.40 — 72.58
S. Riff	12.33 — 72.99
R. Springfield	12.75 — 70.59
B. Meskowski	13.09 — 68.75

New THOR "B" ENGINE-$6.95



The new THOR "B"—Sensational miniature gasoline engine that REALLY works. Super-power performance; over 15,000 already sold. 1/6 H.P. Complete with coil, condenser, and fully illustrated instructions, only $9.95. In KIT form, fully machined, 5 minutes to assemble $6.95, without coil and condenser. Powers all models. Send $1.00—shipped collect same day C.O.D. FREE—send for big 40-page illustrated Catalog showing hundreds of hobby items.

AMERICA'S HOBBY CENTER
156 W. 22nd Street, Dept. K106 New York 11

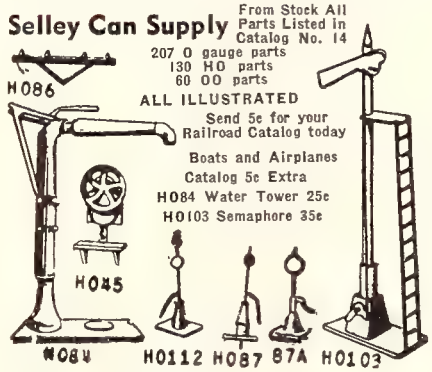
PASSENGER CARRYING LIVE STEAM LOCOMOTIVES
1946 CATALOG

We have RAIL & all CASTINGS for ¾", ½" and ¼" (0-gauge) STEAM LOCOMOTIVES and all parts for their construction, with DRAWINGS AND WRITTEN INSTRUCTIONS by MARTIN S. LEWIS, using his original "Step-by-Step" method of construction as follows (in bound form):
¾" scale, classes 4-6-4 & 4-8-4.....$3.00
½" " " 4-6-2 & 4-8-2..... 3.00
¼"(0-gauge)" 4-6-4 & 4-8-4..... 3.00
STEAM DRIVEN FEED WATER PUMPS for ¼", ½", ¾" & 1" scales..... 3.00
NEW CATALOG lists CASTINGS and all parts for the steam driven pumps, BOILER FITTINGS, Bolts, Nuts, taps, dies, drills, tools AND ALL NEEDS FOR MODEL BUILDERS. Send 25¢ for your copy.

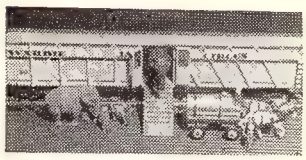
LITTLE ENGINES
BOX 15A WILMINGTON, CALIF

"00" GAUGE
"LATEST ARRIVALS IN BRONZE CASTINGS"
CONSOLIDATION TENDER TANKS ea. $4.00
CONSOLIDATION TENDER UNDERFRAMES ea. 1.25
CONSOLIDATION MAIN ENGINE FRAMES 4 PIECES (with bearing holes drilled) ea. 2.75
NASON RAILWAYS, INC.
P. O. BOX 128 MT. VERNON, N. Y.

Selley Can Supply From Stock All Parts Listed in Catalog No. 14
207 O gauge parts
130 HO parts
60 OO parts
ALL ILLUSTRATED
Send 5c for your Railroad Catalog today
Boats and Airplanes Catalog 5c Extra
H084 Water Tower 25c
H0103 Semaphore 35c



SELLEY MFG. CO. 1377 Gates Ave., Dept. 610R BROOKLYN 21, N. Y.



Know the Fun of Making The Biggest Show on Earth

BUILD A

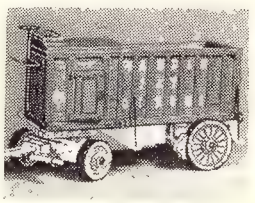
"Wardie-Jay"

CIRCUS

MODEL KITS — Complete In Every Detail! Made to ¼" SCALE

It's the most fascinating model-building hobby ever presented for your enjoyment. You—and every member of your family, will get a tremendous kick out of it.

CANVAS WAGONS $1.75
PLANK WAGONS $1.50
WAGON DRIVERS 15¢

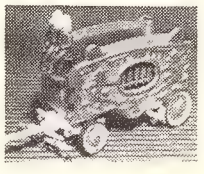


STOCK CARS $2.95
FLAT CARS $1.50
BIG TOP STAKE and CHAIN WAGONS ...$1.95

DRAFT and RING HORSES .....50¢
ZEBRAS .....15¢
ELEPHANTS .....75¢
CLOWNS .....15¢

Each Kit Contains Complete Plans

CALLIOPES $3.00
WATER TANK WAGONS $2.00
BAGGAGE WAGONS $2.00



MENAGERIE PULL & CANVAS WAGONS $1.95
CIRCUS PAINT KITS $1.50
and many, many other models.

SEE THEM! — at Your Dealers!

Made By
Hobby Lines Mfg. Co., Inc.
Clarks Summit, Pa.

MORE BACK ISSUES AVAILABLE

Grouped according to leading articles for your convenience. Easy to select projects of special interest to you.

The majority of these copies are extremely limited in number, due to the war-time paper shortage. Order those you wish NOW, to avoid disappointment later.

RAILROADS
HO GAUGE

Low-Wheeled 4-6-2 Pacific ..... June thru Nov. '44
Semi-Diesel Railcar ..... Aug. '44
The "999" in HO Gauge ..... Sept. Oct. '44
1st Prize in HO Layout ..... Oct. '44
2nd Prize in HO Layout ..... Nov. '44
Open-End Gondola Car ..... Dec. '44
HO Draft Gear ..... Dec. '44
All Brass Hopper Car ..... Jan. '45
Three HO Layouts ..... Feb. '45
C & O Mountain Type Locomotive ..... Mar. '45
Laying Out HO Pikes ..... Apr., May '45
0-8-0 Switcher ..... May '45
Cement Hopper Car ..... June '45
Consolidation and Tender ..... June, July '45

OO GAUGE

Six Passenger Cars ..... Nov. '44
War-Time Car Building, Express Reefer ..... Apr. '45
Double-Deck Sleepers ..... Apr. '45

O GAUGE

Motorized Wrecking Crane ..... Sept. '44

PROTOTYPE DIMENSION PLANS

Railroad Station (Plans in HO) ..... July '44
Old Royal Blur Cars & Loco ..... Aug. '44
Coal Breaker ..... Nov. '44
"Old Time" Railroad Station ..... Dec. '44
Station Platform Railings ..... Dec. '44
B & O Watch Box & Tool House ..... Dec. '44
Interlocking Tower ..... Jan. '45
90-Ton Erie Flatcar ..... Jan. '45
Combination Interurban Car ..... Jan. '45
New Troop Kitchen Car ..... Feb. '45
Four Free Lance Cars ..... May '45
Reading Camelbacks ..... June '45

LIVE STEAM

Valve Gears, Gear Frames & Boiler Saddles (¾" sc.) ..... July '44
Boiler Injector & Lubricator (½" sc.) ..... Aug. '44
Engine Pilot, Pilot Beam, Water Gauge (½" sc.) ..... Sept. '44
Single Cylinder, Steam-driven Feed-Water Pump (½" sc.) Oct. '44
Home-Made Cylinder Cocks (½" sc.) ..... Oct. '44
Atlantic Live Steamer, ¾" scale
Nov., Dec. '44, Jan., Feb., Mar., May, June, July '45
A Good Water Gauge ..... Jan. '45
Alcohol Burners for "Live Steamers" ..... Jan. '45
½ H. P. Horizontal Steam Engine ..... Feb. Mar., May '45
Boiler Feed-Water Pump (½" sc.) ..... Feb. '45
Advantages of Inch Scale ..... Mar. '45
Cab, Coupler, Drawbar Pocket, Bell, Dome (½" sc.) ..... Apr. '45
Boiler Construction Hints ..... May '45
Assembly & Connections (½" sc.) ..... June '45

TINPLATE & SCALE CONVERSION

Hi-Rail-Cantilever & Steel Arch Bridges ..... July '44
Suspension Bridges ..... Aug. '44
Adding Human Interest to Your Layout ..... Sept. '44
Wherefore "Hi-Rail"? ..... Oct. '44
Flag Stops ..... Nov. '44
Passenger Stations ..... Jan. '45
Books for the "Hi-Railer" ..... Jan. '45
"Combination" Stations ..... Feb. '45
Smooth Scaling ..... Mar. '45
Car Kinks ..... May '45
Tin-Types "Trued to Life" ..... June '45
Along the Tinplate Track ..... Monthly Feature

TROLLEYS

Model Cattle Car (Prototype Dimensions) ..... July '44
Shooting Trouble on HO Motor Trucks ..... Oct. '44
Trolley Wirework ..... Nov. '44
Draw Your Own "Interurban" Plans ..... Dec. '44
Combination Interurban Car ..... Jan. '45
Interurban Depot & Substation ..... Feb. '45
Practical Special Work ..... Mar. '45
Hudson & Manhattan Tube Cars ..... Mar. '45
Interurban Mail ..... Apr. '45
Electric Railway Power House ..... May '45
"Open Air" Elevated Railways ..... June '45

MISCELLANEOUS

6-Inch Naval Gun ..... July '44, Mar., Apr. '45
Amphibian Troop Carrier ..... Aug. '44
Building Model Locomotives ..... Jan., Feb. '45
Useful Car-Building Hints ..... Mar. '45
A Circus Wagon ..... Mar. '45
An Old Fashioned House ..... Apr. '45
Ladder Truck ..... Apr. '45
Annual Index ..... May '45
1946 Annual Index ..... Free on Request

AIRPLANES

Helldiver, SB 20-1 (Prototype Dimensions) ..... July '44
Accipiter VI, Class D ..... July & Aug. '44
"Tornado," Class B Guide-Liner ..... Sept. '44
"Scrappy," A or B Gas Model ..... Oct. '44
A De Luxe Glider ..... Nov. '44
"Elwy," Class C Gas Model ..... Dec. '44, Jan. '45
Dartwin Speedster, Class A, B, C Control-Line ..... Feb. '45
"M-C Special" Guide-Liner ..... Mar. '45
"Squatty" III, rubber-powered Class D ..... Apr. '45
"Speed-Wall," rubber-powered ..... May '45
"Thermite," Class C Glider ..... June '45

ELECTRICAL ARTICLES

Magneto for Boat Engines ..... July '44
Home-Made Telephone ..... July, Aug. '44
Battery Changing Hints ..... Aug. '44
Switch Motors from Doorbells ..... Oct. '44
Polarity Indicator ..... Oct. '44
A. C. Power Supply ..... Nov. '44
Radio Control for Model Layouts ..... Dec. '44
Crossing Gates, Electrically Controlled ..... Dec. '44
Wind Your Own Magnet ..... Dec. '44
Storage Battery Hints ..... Jan. '45
Direct Current Supply Power ..... Apr. '45
Home-Made Rheostats ..... June '45

SHOP WORK

Cutting Irregular Holes ..... Dec. '44
A Wheel Remover ..... Dec. '44
Alcohol Soldering Torch ..... Feb. '45

BOATS

Magneto for Boat Engines ..... July '44
"Misfily," Prize-Winning Model Speed Boat ..... May '45

RACE CARS

Molding Car Bodies ..... July '44
Getting Ready for Racing ..... Mar. '45
Building a Model Race Car ..... May thru Nov. '45
How to Get More Speed ..... May '45

MODEL CRAFTSMAN Dept. BI-1046, Ramsey, N. J. *All 1944, 30¢ each; 1945, 25¢ each.*

Gentlemen:

Please ship me the following numbers of MODEL CRAFTSMAN immediately: .....

.....

.....

I enclose my check ☐ ; money order ☐ ; in payment. (Add 5c to checks.)

Name .....

Street ..... City .....

ST. PETERSBURG CLUB HOST TO FLORIDA BOYS

The West Coast Midget Race Car Club of St. Petersburg, Florida, was host to entries from Tampa, Jacksonville, Eustis, Miami and Mount Dora in a State midget auto race held Sept. 2nd. Over 30 cars were entered, the meet getting off to a good start at 1:00 P.M. W. S. Thornton's spur gear from Jacksonville, run by proxy F. N. Ironmonger, took top honors with a speed of 105.8 MPH, which is a new record for their track. Second place went to another proxy car owned by Victor Bascal of Miami with 101.1 MPH. Two of the local boys, Roy Buckert and Don Allen, tied for first spot in the proto class at 82.5 MPH; Buckert won the run off. Results follow:

SPUR GEAR	MPH
W. S. Thornton, Jacksonville	105.8
Victor Bascal, Miami	101.1
Forest LaRoe, Eustis	100.0
W. A. Baker, Eustis	100.0
F. Ironmonger, Jacksonville	97.8
Ed Stone, Eustis	96.8
R. E. King, Miami	92.7
Rowland Wilson, Tampa	90.9
Stanley Newman, Tampa	90.0

PROTO	
Roy Buckert, St. Petersburg	82.5
Don Allen, St. Petersburg	82.5
Rowland Wilson, Tampa	81.8
W. Charles, Miami	81.8
Victor Gordon, St. Petersburg	78.9
W. Charles, Miami	75.0
Ed Stone, Eustis	74.3
W. Zall, McIntash	69.2

NON HORNET CLASS	
George Robinson, Jacksonville	64.7
Bob Kennedy, St. Petersburg	64.2
Don Allen, St. Petersburg	56.2

A banquet was given by the local club for all contestants and their wives and other guests. Ralph Salter, local club president acted as M.C. and a discussion was held concerning plans for the formation of a circuit or league composed of all cities in the state which have shown an interest in model car racing. The circuit, tentatively known as the Grapefruit Circuit, will be the foundation for state competition and quarter-annual racing meets at alternate cities will probably be held. To keep the state-wide ball rolling, the members elected D. W. Hulse as secretary pro tem of the future organization and plans were made to hold a meeting in Eustis on invitation of the Eustis Club on Sept. 29th for further discussion and to draw up a state-wide club charter.

Numerous inquiries from car owners in the north regarding Florida Car Club's plans for a winter schedule indicate an interesting winter of racing will be enjoyed this year. Meanwhile the local club is fast making headway in its campaign to establish a permanent track for the exclusive use of the midget racers. Through the personal efforts of the local club members, a complete set of plans has been drawn to be presented to Press Phillips, head of the Sports Committee of the Chamber of Commerce, showing that the entire cost will be no more than $275. Adding supporting facts in their favor, the club members will point out midget auto racing's high interest mark in the state to both men and boys and its possibilities as an outlet for youthful effort. Club members are willing to devote their time and labor.

FUELS

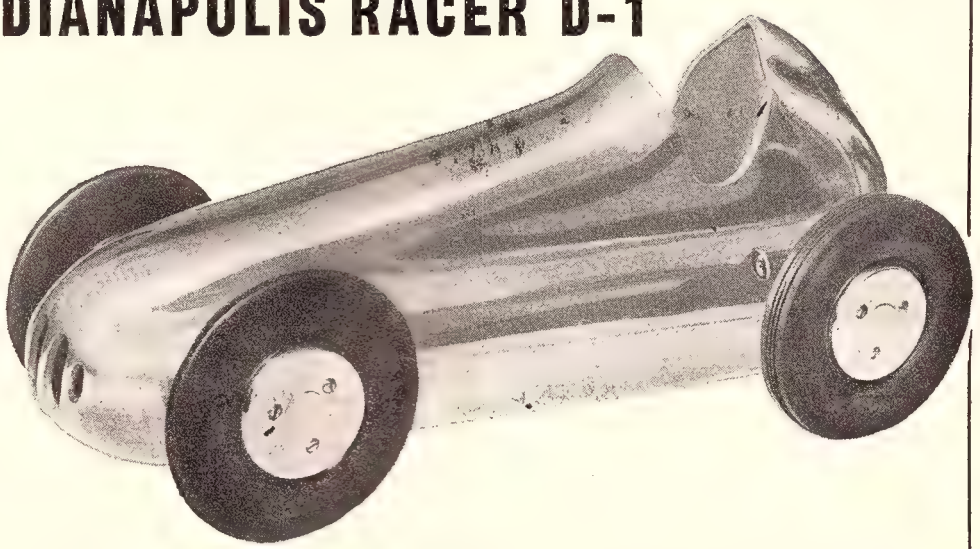
"POWER MIST"
"SPITFIRE"
"BLUE BLAZER"

THE ORIGINAL MINIATURE ENGINE FUELS "PROVEN SUPERIOR"
58 OFFICIAL WORLD SPEED RECORDS
OUR SIMPLEST FORMULA CONTAINS 6 INGREDIENTS, CASTOR OIL LUBRICATED COSTING ONLY 35¢ PER QT.
"NO GAS AND PETROLEUM OIL MIXES"
Supercharged & Fortified Castor Oil
FUEL FACTS AND FORMULAS
How to determine the correct fuel. Full information and literature —at your dealer or send stamped addressed envelope.
FRANCISCO LABORATORIES
3787 Griffith View Drive • Los Angeles 26, California

DEALERS
Build up your sales volume and profits. Handle our complete line of:
MODEL RAILROAD SUPPLIES
MODEL BOAT KITS
MODEL RACE CARS
MODEL AIRPLANE KITS
HANDICRAFT SUPPLIES
The country's leading lines.
America's largest Model & Handicrafts Suppliers.
Large Stocks - Quick Deliveries - Write
AMERICAN HANDICRAFTS CO., INC.
45-49 So. Harrison St. East Orange, N. J.

NEW...
STEVENS INDIANAPOLIS RACER D-1

Retail $45.00



The Stevens Indianapolis Racer D-1 was designed by Speedway experts to give maximum performance in Model Race Cars. Just check this list of features!

- Detachable Motor Mounting Frame!
- Body—Two Piece Polished Aluminum Casting!
- Balanced, Machined Ball Bearing Wheels!
- Ball Bearing Drive Axle!
- Precision Machined Gears!
- Latest Design in Tires!

Ask Your Dealer For The Stevens Indianapolis Racer D-1

Acme Products Mfg., Inc. 2106 Olney St., Indianapolis, Ind.

DEALERS DIRECTORY

These ads are intended for the convenience of readers who wish to trade with their local dealer. Copy is limited to 15 words in addition to name, address and phone number. Group numerals and hyphenated words may be counted as one. Display type and mention of catalog not allowed. Rates: 12 times, $45.00; 6 times, $30.00, payable in advance. No less than 6 insertions accepted. MODEL CRAFTSMAN, Ramsey, N. J.

ARIZONA—PHOENIX

Planes — Trains — Boats
Kits — Supplies — Accessories
"Where Your Hobby is our Hobby"
HO Gauge exclusively

PHOENIX MODEL SUPPLY COMPANY
3010 N. 16th Avenue 5-3494

CALIFORNIA—LOS ANGELES 6

We carry all nationally advertised
Planes, O and HO Trains, Boats

PICO MODEL AIRPLANE CO.
2580 W. Pico Blvd. Phone, Drexel 5894

CALIFORNIA—LOS ANGELES 7

Railroads, all gauges Machine work
Model ship supplies
Approved service for:
Mantua, Varney, Scalecraft, Lionel

TROXEL BROS. MODELS
1730 W. Adams Blvd. Rochester 5567

CALIFORNIA—LONG BEACH 2

Complete stock of supplies for
MODEL RAILROADS, AIRPLANES
and SHIPS

HOBBY SUPPLY SHOP
1222 American Ave. Ph. 640-54

CALIFORNIA—OAKLAND 12

"Your fun is my business"
"My stock of trains, race cars, engines, will surprise you!"

JACK COLLIER'S
"Toys for men!"
3669 Grand Ave. Te. 5936

CALIFORNIA—OILDALE

SCALE MODELS
TRAINS — SHIPS — PLANES
Most Complete stock of hobby supplies in Kern County

RIVER HOBBY SHOP
1219 N. Chester Avenue

CALIFORNIA—SAN BERNARDINO

MODEL KITS
TRAINS — PLANES — SHIPS
"OO" A Specialty—ALL GOOD LINES.
Open Daily—Wed. & Friday Eve.

HECKMANS HOBBY SHOP
249½ E. Base Line

CALIFORNIA—SAN FRANCISCO

Everything in Model Supplies
Railroads — Ships — Airplanes — Radio
Open until 6 P.M.

OFFENBACH'S
1452 Market Street Underhill 4204

CALIFORNIA—SAN FRANCISCO

MODEL KITS
TRAINS — PLANES — SHIPS
HO A SPECIALTY — ALL LINES
Open Wednesday Eves.

MERSEREAU'S
416 Kearney Street Phone, Exbrook 2154

CALIFORNIA—SAN JOSE 23

Railroad Supplies
Airplanes — Engines — Boats
Hand power tools and accessories
Open evenings till 6 P.M.

HOBBY DEPT.
The Boys Store
321 S. 1st Street Ballard 3026

COLORADO—DENVER 6

MOUNTAIN STATES
MODEL HOBBY CENTER
Trains — Planes — Ships — Motors
Hand Power Tools
APPROVED LIONEL SERVICE

FISHER HARDWARE COMPANY
2322 E. Colfax Avenue

CONNECTICUT—HARTFORD

Model Kits and Supplies
PLANES — TRAINS — BOATS
& Military Model Kits

BROWN THOMSON'S HOBBY CORNER

CONNECTICUT—NEW HAVEN

New England's leading hobby store
Open 8 AM to 6; 9 PM Fridays

PARMELE & STURGES
51 Crown Street

GEORGIA—ATLANTA

If it's a Leading Line, we Have It
Airplanes — Railroads — Race Cars
Motors
SPECIAL BUILT-UP JOBS

ATLANTA HOBBY SHOP
604 Peachtree St., N. E.

ILLINOIS—CHICAGO 2

MODEL RAILROADS - SHIPS - AIRPLANES
LEATHER GOODS - STAMPS AND COINS

BEN'S HOBBY SHOP
In the Heart of the Loop
72 W. Washington Street Dearborn 5373

ILLINOIS—CHICAGO 41

Model Airplanes — Boats — Trains
and Racing Cars
Open Evenings until 9

M and G HOBBY SHOP
3527 N. Pulaski Road Keystone 5310

ILLINOIS—CHICAGO 41

Model Kits and Supplies
PLANES - TRAINS - BOATS
RACE CARS and MOTORS

PORTAGE MODEL AND HOBBY SHOP
4704 Addison St. PENsacola 0447

ILLINOIS—CHICAGO 40

O — OO — HO Railroad Supplies
Airplanes, Race Cars, Boats, Fittings
Open Tues., Thurs., Sat., 9 P.M.

UPTOWN HOBBY SHOP
4508 Broadway Longbeach 7251

ILLINOIS—CHICAGO

AIRPLANES, KITS, ENGINES
Complete Stock O — OO — HO Railroads,
Scale and Power Boats — Model Homes

TROST MODEL AIRPLANE SHOP
3111 W. 63rd St. Prospect 1354

ILLINOIS—CHICAGO 22

Planes — Boats — Trains
Kits — Supplies — Accessories
Open Evenings until 9; Sunday until 2

DOUGLAS MODELCRAFT
2505 W. Chicago Avenue

ILLINOIS—DIXON

Planes - Boats - Trains
Most everything as available

Open evenings
Sunday by appointment only

BUNNELLS HOBBY STORE
117 N. Galena (North of Bridge)

ILLINOIS—KENILWORTH

Large Stock on Hand
Ships — Airplanes — Railroads
OPEN SUNDAY 11:00 to 3:00

NORTH SHORE HOBBY SHOP
406 Green Bay Road

IOWA—DAVENPORT

O — OO — HO Kits and Supplies
Boats, Airplanes, Archery
A Complete Line of Handicraft Materials

WESTERN CRAFTS AND HOBBY SUPPLIES
409 W. Second Street

MASSACHUSETTS, BOSTON

O-HO-OO Kits and Supplies
Boats Airplanes
Authorized Lionel Repair Service

BOSTON MODEL R.R. CO. Opp. South Station
665 Atlantic Avenue Room 127

MASSACHUSETTS—BOSTON

MODEL KITS & SUPPLIES
TRAINS — PLANES — BOATS
& Military Model Kits

GILCHRIST'S HOBBY CORNER
817 Washington Street

NEW JERSEY—BLOOMFIELD

O - OO - HO — Kits and Supplies
Accessories and Repairs
Gas Engines - Planes - Boats

George Delany Model RR. Shop
38 Union Place Bl. 2-0286

NEW JERSEY—DUNELLEN 8

Model Railroad Kits and Supplies
Daily to 5 p.m. Weds. to 9 p.m. Sat. 'til noon

The MODEL RAILROAD SHOP
292 Vail Avenue DU 2-5696
Model Railroads—EXCLUSIVELY—Since 1932

NEW JERSEY—HACKENSACK

Complete Line Railroad Supplies
All Gauges, Gas Engines, Kits,
Boats, Race Cars, Hobbies and Crafts

HOBBY LAND
390 Main Street

NEW JERSEY—JERSEY CITY

Airplanes, Ships, Railroads
Race Cars, Tools, Scale Houses,
Scenery items, Supplies
Open until 10 P.M.

ACE MODEL HOBBY SHOP
57 Monitor Street

NEW JERSEY—WESTFIELD

Kits and Supplies for Railroads
Boats and Airplanes

CENTRAL JERSEY MODELS HOBBY STORE
137 Elm Street Westfield 2-2232

NEW YORK—NEW YORK 19

NEW YORK'S MOST UNIQUE
HOBBY STORE
Airplanes — Boats — Trains — built-up
Models — Open Thursday nights 9 P.M.

MODEL RAILROAD EQUIPMENT CORP.
21 W. 45th Street Longacre 5-2465

NEW YORK—NEW YORK

New York's Largest Hobby Store
Kits, supplies for railroads, airplanes
boats, race cars — Bicycles — Gifts

TRYMO HOBBYCRAFT
81 Chambers Street Worth 2-0472-3

OHIO—COLUMBUS

Railroads — Boats — Airplanes — Tools
Electric Trains — Camera Supplies
Open Daily, Monday and Wednesday Evenings

COLUMBUS HOBBY MART
73 E. Gay Street Main 6108

OHIO, DAYTON 5

Folks Travel Miles to Deal at

GOODS HOBBY SHOP
1729 N. Main Street
RACE CARS HO TRAINS U CONTROL PLANES

OKLAHOMA—TULSA
Models — Model Supplies
ELECTRIC TRAINS REPAIRED
Lionel Service
Old Trains, Models, Toys bought — any condition
L R BABB MODEL & TOY SHOP
305 E. 4th

OREGON—PORTLAND 13
Airplanes—Railroads—Boats—Supplies
Operating Railroad Display
GLEN'S HOBBY DEN
5820 N.E. Sandy Blvd.

OREGON—PORTLAND 5
MODEL, HOBBY and ARTCRAFT SUPPLIES
Portland's Hobby Information Center
Lionel - American Flyer - Aircraft Service
PORTLAND HOBBIE CENTER
1302 S.W. Alder Street BEacon 1532

OREGON—PORTLAND
! ! Portland's Largest Stock ! !
Airplanes, Motors — Parts
O-OO-HO Railroad Kits — Supplies
Marine Kits — Fittings. Circus Models
VIC'S HOBBY SUPPLY
New Address
3061 N.E. Sandy Blvd. Garfield 3108

OREGON—PORTLAND 4
SCALE RAILROADS — SHIPS — RACE CARS
Hobby Kits — Tools — Model Builders
Hardware — Planes — Books — Plans
WESTERN HOBBYCRAFT COMPANY
728 SW 1st Ave., Phone At-4440

PENNSYLVANIA—EASTON
Airplanes, Railroads, Boats, Race Cars
Everything for the Hobbyist
Craftwork, Power Tools, Supplies, Toys
HOBBY HANGOUT, 509 Northampton Street

PENNSYLVANIA, PHILADELPHIA 34
Railroads Ships at Planes
AL BRACKIN'S
Hobby Shop
Formerly of Quaker City Model R.R. Shop
743 Allegheny Avenue RE. 9-6011

PENNSYLVANIA—PHILADELPHIA 2
"Les" Myers
MODEL MART HOBBIES
40 South 16th Street
Daily 'til 6 — Wednesday 'till 9

PENNSYLVANIA—PHILADELPHIA
If it's in the "Craftsman"
it's a 100 to 1 that it's on our shelves!
THE ELECTRONIC AND HOBBYCRAFT STORES
324 W. Chelten Ave. (44) GE 8-7213
5101 N. Broad St. (41) MI 4-2191

PENNSYLVANIA—PITTSBURGH
Complete Modelcraft & Supplies
FLINN'S MODEL HOBBIES
814 Liberty Avenue

PENNSYLVANIA—PITTSBURGH
MODEL AIRPLANES — SHIPS
MINIATURE RAILROAD EQUIPMENT
HO and O SCALE TINPLATE
Open Evenings till 9 P.M.
LARRY'S HOBBY SHOP
1826 Brownsville Road, Carrick

PENNSYLVANIA—SCRANTON 10
Operating Layouts
Trains — Airplanes — Race Cars
Motors — Ships — Tools
Trade-ins Accepted
SCRANTON HOBBY CENTER
315 Adams Ave., Town Hall Bldg.

SPORTS AND HOBBY PARK FOR OAKLAND, CALIF.

THE Chamber of Commerce of Oakland, California, has just released news on the new Sports and Hobby Park being developed in Leona Heights, Oakland, Calif. The entire project is a big thing for the hobby game and it looks as if Oakland is setting a real fast pace. The park should be completed this year at a cost of nearly $500,000.

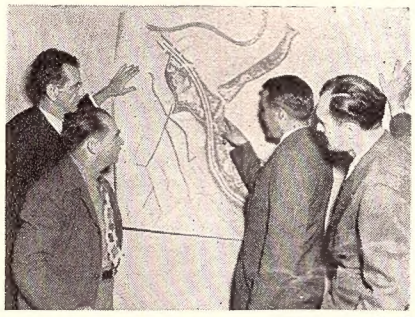


Photo by Baab

Left to right, Jack Collier, Frank Jenkins, Wm. P. Mott, Jr., and Robert Churchill look over map of new Leona Heights Sports and Hobby Park to be erected this year.

Included in the park layout will be two complete Model Race Car Tracks, three complete U-Control flying circles, one pool for Model Power Boats, one lagoon for Model Sail Boating, one Roundhouse for HO and O gauge Model Railroaders, and one complete layout for the Golden Gate Live Steamers. All activities are to be governed by the local clubs and under their general supervision. The Park location is away from the residential section yet still within the city limits on one of the super highways slated for improvement.

The race car tracks will have a clubhouse and bleachers resembling the big speedways. U-Control flying field will have an Administration Bldg., as do large Airports; the Railroaders will have a clubhouse resembling a roundhouse, and the Model Boat fans will have a clubhouse resembling a Yacht Harbor. A Planetarium, similar to the one in Chicago, will be constructed, housing all of the eating places and modern facilities to be had at the Park.

PENNSYLVANIA—STROUDSBURG
Railroads, Ships, Race Cars, Airplanes,
Tanks, Jeeps, Supplies, Tools, Toys
THE HOBBY HOUSE
525 Main Street Phone 895

TEXAS, DALLAS 4
HALL'S HOBBY HOUSE
4823 Bryan at Fitzhugh
Ph. T-2550
Dallas 4, Texas
Planes — Boats — Tinplate Trains — HO Gauge
Trains — Tools — Race Cars — Motors — Model
Supplies — Gifts — Antiques

CANADA—HAMILTON
Trains, Boats, Planes, Archery, and Crafts
Complete stock of leading makes
RILEY HOBBY SERVICE
Serving all Canada
755 King Street E. Phone: 3-1011

a *Big* Magazine for HOBBY DEALERS and JOBBERS

You will find considerable merchandising help and information in the MODEL-CRAFT Section of this highly influential, valuable trade magazine, published for more than 38 years.

Look over the following captions of recent editorial articles—every one of interest and assistance to you as a dealer or jobber:

Model Industry Raises Its Sights
Hobby Shop and Model R.R. Society Have Grown Together
Model Industry Looks to the Future
The Story of a Hobby Jobber
Cradle of the Nation's Fliers
New Hobby Dealer Makes Good
Why Model Aviation?
New Hobby Shop Has Triple Appeal
Model Industry Assn. Meeting in New York
Better Records for the Hobby Shop
Those Darned Windows!
Complete Accessories Stock Secret of Hobby Success

There are many others, as well as news of the industry and the Model Industry Association.

The toy section will also be found profitable for hobby dealers and jobbers. The July issue lists certain types of toys and games which these distributors can sell profitably and easily.

THE PRICE? Just $3 a year—including a FREE copy of our 400-page BUYERS' GUIDE, with the complete Model-Craft Section, the only hobby directory published. Send for your subscription at once. Don't miss a copy! Number of pages runs from 200 to 700 per issue.

Franklin Sutton
EDITOR

Published Monthly by
TOYS & NOVELTIES PUB. CO.
307 North Michigan Ave., Chicago 1, Ill.

Build PERFECT MODELS this EASY WAY

4 BOOKS $1.00

226 PAGES

OVER 800 ILLUSTRATIONS

NOW EVERYBODY CAN BUILD PERFECT MODEL PLANES! No more puzzling over confusing plans. No more wondering what tools or materials to buy. No more disappointments in plane performance. These 4 step-by-step picture books show you exactly what to do. You don't hesitate—you don't waste material. Before you realize, the model is ready to fly. . . .

Learn what tools and materials to buy—how to translate kit plans into finished planes. Study building, covering, assembling of fuselage, wings, stabs, rudder, tail surfaces—know motor installation, testing. Save time and labor with ingenious short cuts, new approaches to old problems, practical modelling helps.

Guillow's 4 books are the practical, picture way to build outstanding model planes.

BY MAIL If no dealer near you, order direct. Send $1 to Paul Guillow, Wakefield, Mass., and receive ALL 4 books postpaid to any point in U. S. A.

PAUL GUILLOW . . . WAKEFIELD, MASS.

DOOLING BROS.

ARE FIRST AGAIN with a major improvement in the operation of model gasoline engines for race cars, airplanes and boats! A "Constant Level" fuel tank which will let your motor run all the fuel out without changing from too rich to too lean. Gravity feed from fuel tank to "constant level" tank. Prevents leakage of fuel into engine when not running. Maximum power of engine under your control at all times. No guessing! Acts like a carburetor bowl and not affected by centrifugal force. Patent applied for.

Write for circular

Dooling Bros.
5452 West Adams Blvd.
Los Angeles 16, Cal.

STAMMER?

This new 128-page book, "Stammering, Its Cause and Correction," describes the Bogue Unit Method for scientific correction of stammering and stuttering—successful for 45 years. *Free—no obligation.*

BENJAMIN N. BOGUE, Dept. 5421
Circle Tower, Indianapolis 4, Ind.

GET THIS FREE BOOK!

BIG Assortment GUNS & BOMBS 25c
Postage 5c Extra

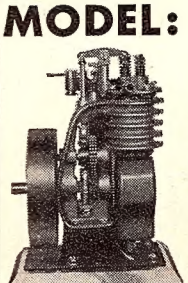
Special big assortment of 10 die-cast finely detailed BOMBS and GUNS

Boat and airplane fittings—parts also largest complete line of O-HO-OO gauge Railroad parts available anywhere.

Send for your catalog and assortment today!
Catalog only 5c to cover mailing

SELLEY MFG. CO. 1377 Gates Ave., Dept. 610A BROOKLYN 21, N. Y.

MODEL: Gasoline Engine
Ready to Run



A precision built and engineered single cylinder FOUR-CYCLE model gasoline engine; adjustable valves; steel pinion and cam gears; a real ignition system; speed 300 to 3,000 rpm; develops approximately ⅛ hp. Bench tested and ready to run. Available with stationary or marine engine base. Full instructions. Lots of fun. Price: $40.00 complete, with coil, condenser and starting rope.

Immediate Delivery

7¾" high—3" wide
Cyl. 1" dia.; stroke 1"

The THOMPSON ENGINEERING CO.
266 WINCHESTER PLACE, GRAND RAPIDS 2, MICHIGAN

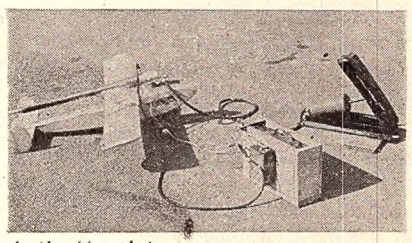
RICKENBACKER TROPHY

(*Continued from page 20*)

placed), and also the Grand Prize for the Meet.

At the Florida State Model Plane Meet at Daytona Beach, Aug. 11th, he won first in both C and A & B Gas-powered models, the former giving him permanent possession of the Rickenbacker Trophy, also first in "A" U-Control and with other placings came home with four motors and the Grand Prize on points for the meet in addition to the famed trophy.

Since 1938, Bill has won 17 motors for firsts, as well as 17 trophies for firsts and Grand Prizes, 34 firsts in all, plus numerous kits, etc. He has designed two models which he plans to put on the market in kit form. His father, W. T. Thomas, was former President of Thomas Aeroplane Co. and then Vice Pres. in charge of production of the Thomas-Morse Aircraft Co., of Ithaca, N. Y., during World War I.



A. Hawkins photo

Keith Goodwin's Minijet 24" model with complete equipment—vibrator coil and batteries, air pump and hose.

U-CONTROL CONTEST COMING UP AT SAN DIEGO

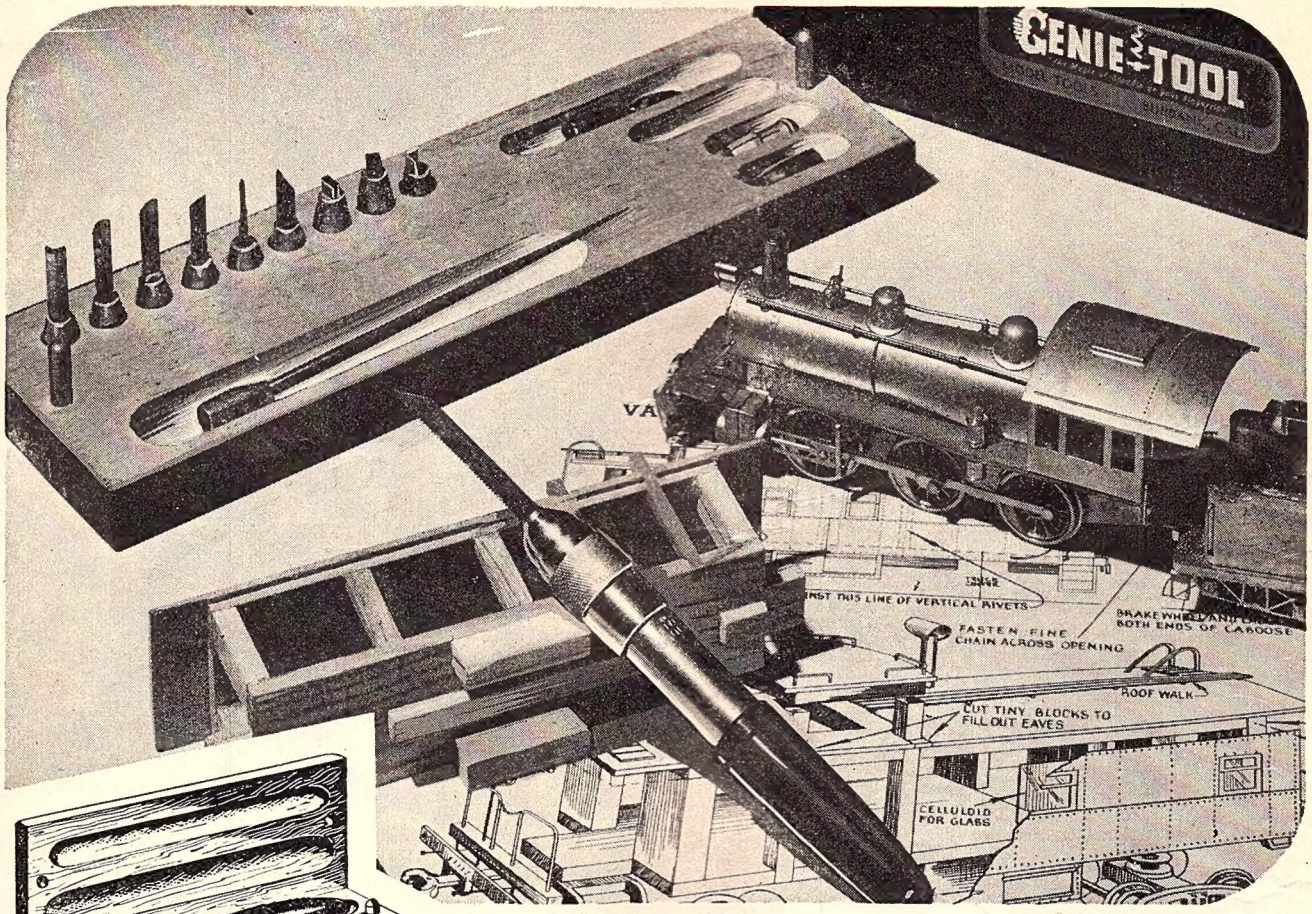
THE San Diego Airliners U-Control Club is holding their Third Annual Western Regional U-Control Championship Contest on October 13th to be held at Balboa Stadium, San Diego, Calif. Contest will start at 9 A.M. and run through until 10 P.M. under lights, will be A. M. A. sanctioned with plenty of trophies, cash and merchandise awards. For further information, address San Diego Airliners, 3921 5th Ave., San Diego 3, Calif.

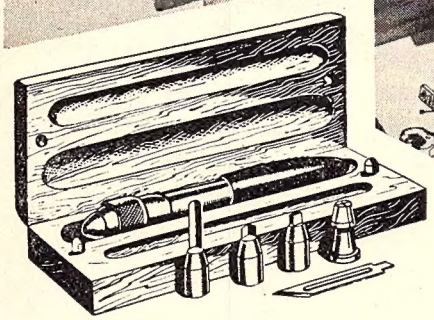
CASH PRIZES

ANNOUNCEMENT has just been made by America's Hobby Center, 156 West 22nd St., N. Y. 11, N. Y., manufacturer of the Thor Engine, that they are offering Cash Prizes to those modelers whose Thor-powered plane places or wins in any contest. As an incentive for you to use their product, they will offer from $5 to $100 to *each* contestant placing or winning with a Thor-powered plane, amount depending, in their judgment, upon the importance of the contest and place won.

All that is required, is to simply give them verified facts (meet, time, place won, speed, distance, etc.) and a picture of the model with Thor installed.

"Magic at Your Fingertips"





GENIE TOOL SET NO. 96
Here's the beginner's set. Included is ejector-type GENIE TOOL holder—razor-thin outlining blade—drill-chuck—3/32" radius gouge—1/16" notch-cutter—right angle "V" blade. In storage chest . . . $4.95

No. 95 set illustrated in photograph above, complete with 13 accessories . . . $9.95

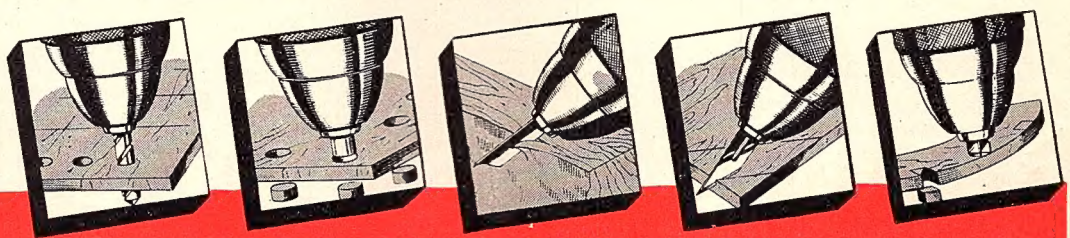
NOW AVAILABLE FOR MODEL BUILDERS!

GENIE TOOL

. . . . . If YOU are not using this radically different ALL-PURPOSE Cutting Tool, then you're working too hard. GENIE TOOL has been acclaimed by model builders from Coast to Coast as the *right answer!* Over 20 interchangeable, precision-made accessories are available. Don't drill, file or carve the hard way—USE A GENIE TOOL!

There's a GENIE TOOL accessory for every use!

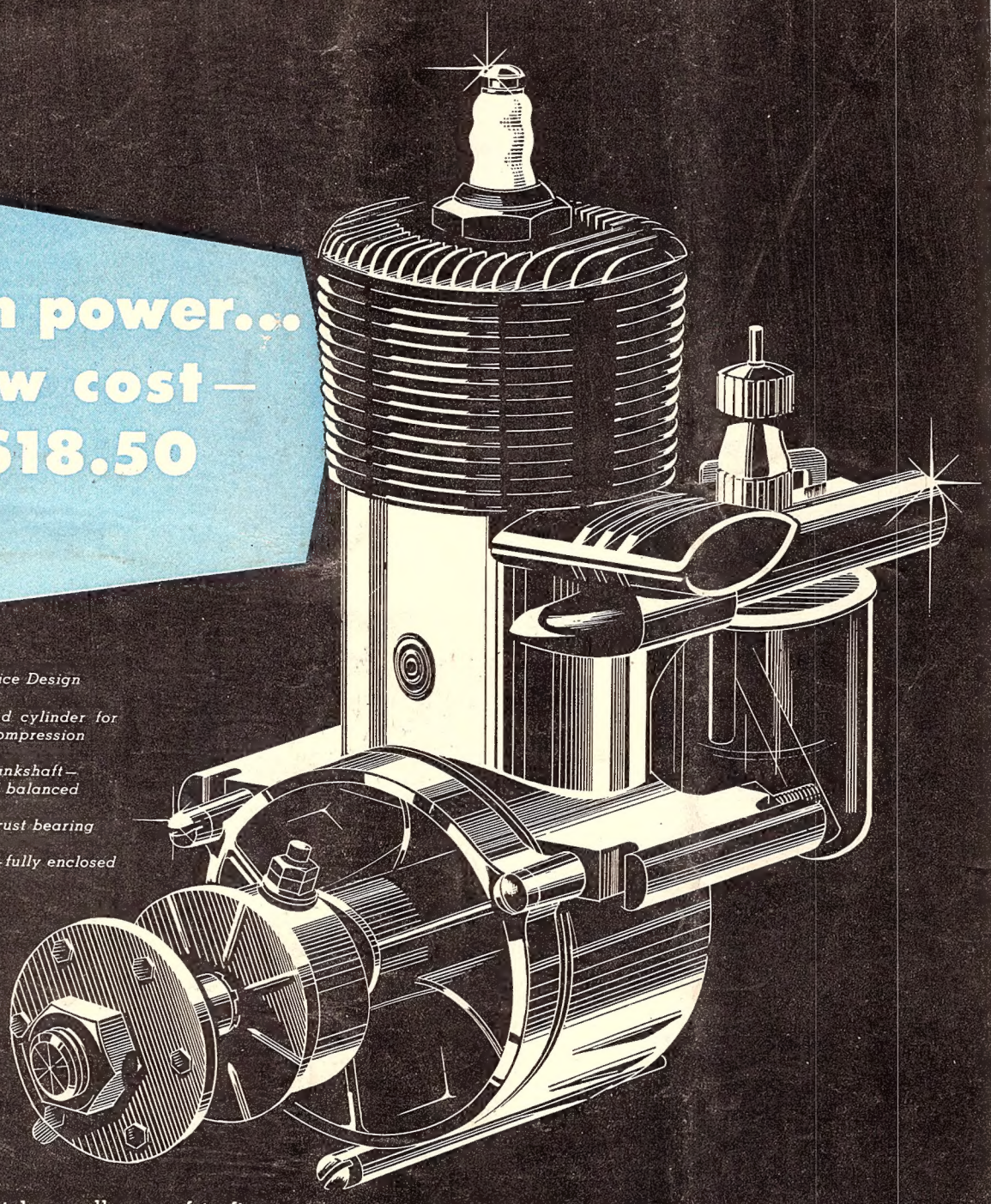
WRITE FOR CATALOG TODAY!



JOBBERS—DEALERS—MODEL BUILDERS—WRITE DIRECTLY TO:

MODEL TOOLS • BOX 30 • BURBANK, CALIF.

high power... low cost— $18.50



Ohlsson & Rice Design

Lapped piston and cylinder for microsealed compression

One piece crankshaft— hardened and balanced

Ball bearing thrust bearing

Flutter-free timer—fully enclosed

It doesn't take a college prof to figure out that you can build a hundred engines at less cost per engine than you can ten. Or ten thousand engines at less cost than a thousand. And that's the "why" of O & R's low cost. A plant devoted to building complete model aircraft engines... the largest plant of its kind in the world. Experienced model engine craftsmen who regard thousandths of an inch as being as big as all outdoors—the difference between ordinary and winning performance!

Ohlsson & Rice

Standard of the Model World

OHLSSON & RICE, INC. • EMERY AT GRANDE VISTA, LOS ANGELES 23, CALIFORNIA